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ABSTRACT

This publication is designed to provide students with the knowledge they need to pursue a career in medical-surgical nursing. Fifteen units are provided. Each instructional unit includes some or all of the basic components of a unit of instruction: performance objectives, suggested activities for the teacher, information sheets, job sheets, written tests, and answers to assignment sheets and written test. Most units of instruction are designed for use in more than one lesson or class period of instruction. The 15 units relate to applying the nursing process to the care of the following: integumentary system, musculoskeletal system, central nervous system, cardiovascular system--heart, cardiovascular system--blood vessels, cardiovascular system--blood, upper gastrointestinal system, lower gastrointestinal system, urinary system, respiratory system, endocrine system, reproductive system, vision disorders, ear disorders, and immune system disorders. An instructional supplement suggests teaching strategies to address student difficulties in acquiring basic skills in the following areas: reading, writing, mathematics, science, oral communication, interpersonal/relating, creative thinking/problem solving, and employability. (YLB)

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Medical-Surgical II

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CIMC

Teacher Edition

Oklahoma Department of
Vocational and Technical Education
1500 West Seventh Avenue
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Medical-Surgical II

Developed by the
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Oklahoma Department of Vocational and Technical Education

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MEDICAL-SURGICAL II

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FOREWORD

This publication is one of ten comprehensive courses from the Practical Nursing series of competency-based curricula developed by the Curriculum and Instructional Materials Center. It is designed to prepare students for employment by systematically guiding the student's learning activities from the simple to the complex.

A major challenge in the development of these materials has been to identify content and learning activities which will prepare health care practitioners who can function effectively in the rapidly changing health care industry. To meet this challenge, we have relied heavily upon the input and support of health care industry professionals.

The information found in each of the courses in the Practical Nursing series will help the instructor plan and implement a systematic learning process which will ensure student mastery of specific outcomes. Although we believe these publications do provide a systematic, functional curricula, instructors are encouraged to localize, individualize and supplement these materials to meet specific student/client needs.

Roy Peters, Jr., Ed.D
State Director
Oklahoma Department of Vocational
and Technical Education

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State Supervisor
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and Technical Education

PREFACE

Technology is responsible for many of the major advances in health care today; however, this same technology is also responsible for the fast-paced, high stress environment in which we all must live and function. As the pressures of a "high-tech" society increase, the need for quality nursing care will increase proportionately.

To effectively care for the total person and promote high-level wellness, the practical nurse must have a clear understanding of the basic concepts of medical surgical nursing, as well as the practical skills necessary to apply these concepts in the delivery of care.

This publication will provide the practical nursing student with the opportunity to acquire the knowledge and skills necessary to deliver effective patient/client care today... and in the future.

Sherry S. Wietelman, M.S.
Curriculum and Instructional Materials Center
Oklahoma Department of Vocational and Technical Education

ACKNOWLEDGEMENTS

The Curriculum and Instructional Materials Center (CIMC) extends its appreciation to those individuals who played important roles in the development of *Medical-Surgical II*.

A generous thank you is extended to the professional individuals who served on the *Medical-Surgical II* curriculum task analysis and validation committees. Their contributions of time, talent, and knowledge in determining the content of this publication are greatly appreciated.

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Thanks go to Sandra D. Williams for writing the original drafts of the units and helping us come up with a usable format that presented content in terms of the nursing process.

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Special appreciation is offered to Terri Tomson, CIMC secretary, who coordinated all of the meetings, processed all of the paperwork, copied all of the units, and kept us all organized.

Others who deserve recognition for their work on this publication are: Brenna Tillman and Charlotte Tarkington for their desktop publishing work; Lisa Tillman, LPN, for her technical review of the material; and Ann Johnston, for her editing and proofreading work.

Only through the close cooperation of the Curriculum and Instructional Materials Center staff was this curriculum developed. Sincere thanks are shared with the CIMC team leaders.

John Friedemann
CIMC Team Leader

Lynna Ausburn, Ph.D.
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Special recognition and thanks are also extended to other individuals within the Oklahoma Department of Vocational and Technical Education: Darrell Stiles and his staff at the CIMC Warehouse; Danny Darrow and the entire staff at the ODVTE Print Shop; and Bob Davis and the artists in the ODVTE Art Department.

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USE OF THIS PUBLICATION

INSTRUCTIONAL UNIT

Medical-Surgical II contains 15 units. Each instructional unit includes some or all of the basic components of a unit of instruction: performance objectives, suggested activities for the instructor, information sheets, supplements, transparency masters, instructional supplements, activity sheets, job sheets, written test, and answers to assignment sheets and written test, all of which are included in the instructor's edition. The student workbook includes the objective sheets, information sheets, student supplements, transparency masters, activity sheets, assignment sheets, and job sheets. Written tests may be duplicated for classroom use or *additional copies* may be purchased by calling 1-800-654-4502 or, in Oklahoma, 1-800-522-5810, ext. 589.

All of the unit components tie into measurable and observable learning outcomes. Instructors are encouraged to supplement these components with other resources in order to make them as responsive to local conditions and individual needs as possible.

Most units of instruction are designed for use in more than one lesson or class period of instruction. Careful study of each unit of instruction by the instructor will help him or her determine the following:

- Amount of material that can be covered in each class period.
- Skills that must be demonstrated.
  - Supplies and equipment needed
  - Amount of class time needed for demonstrations
  - Amount of time needed for student practice
- Supplementary materials, including print and non-print media, that must be ordered.
- Resource people who must be contacted.

Objective Sheet (White Pages)

Each unit of instruction is based on the performance needed for successful employment in an occupational area. Performance objectives are stated in two forms. The unit objectives states the overall goal of the unit. It tells what the student should be able to do and what standard will be used to see whether the student can do it. Specific objectives outline the teaching sequence of the competencies required to meet the unit objective.

The objectives should be provided for students and stressed throughout the teaching/learning process. This will help answer any questions concerning performance requirements for each instructional unit. The objectives can also help determine teaching strategies and instructional methods. Instructors should prepare for each unit by deciding how each objective could be best taught.

Instructors should feel free to modify or add objectives in order to meet the needs of the students and community. When objectives are added, the instructor should remember to supply the needed information, assignment and/or job sheets, and criterion-referenced test items.

Suggested Activities (Pink Pages) – **Instructor's Edition only**

The suggested activities page assists the instructor during the preparation stage of the instructional process by providing suggestions for delivery, application, and evaluation. The instructor should read the suggested activities prior to introducing the unit to allow time to obtain supplemental materials, prepare audiovisual materials, and contact outside resources. Duties of the instructor will vary according to the particular unit.

References used in the development of each unit are listed in the "Suggested Resources" section, along with print and non-print media that may be used to teach the unit. These materials can be used by the instructor to supplement his or her knowledge of the subject area or to help students with particular interests or occupational objectives in the area covered.

Information Sheets (Green Pages)

The information sheet provides "must know" content essential for meeting the cognitive objectives stated at the beginning of each unit. It serves as an excellent guide for presenting background knowledge necessary to develop the skills specified in the unit objective.

Students should read the information sheet before it is discussed in class. Space is provided in margins for students and instructors to add notes that clarify and/or expand on the information provided.

The information sheet may include notes, cautions, or warnings. These should be discussed carefully and thoroughly. **Notes** are short verbal additions to the information sheet or procedural outline that provide nice-to-know and decision-making information. A note may tell the student what to watch for or to consider at a given step. It may explain when a step may not be applicable. Notes offer guidance that may help the student understand the process and do it more efficiently. **Cautions** are advisories that tell the student how to avoid causing minor personal injury or equipment damage. **Warnings** are advisories to the student used to avoid serious personal injury or death to the student, persons in the workplace, or users of the project or the procedure. **Dangers** are advisories to the student used to avoid death of students, others in the workplace, or users of the procedure.

Supplement (Green Pages)

Student supplements include instructions that could be used for solving problems and reinforcing or enriching learning. The information presented in a student supplement may consist of tables, charts, written information, forms, or other information students will need in order to complete one or more of the assignment or job sheets. While supplements are not tested over directly, they may be used to assist in meeting the performance objectives.

Transparency Masters (White Pages) - **Instructor's Edition only**

Transparency masters provide information in a special way. The students may see as well as hear the materials being presented, thus reinforcing the learning process. Transparencies may present new information or they may reinforce information presented in the information or assignment sheets.

Transparencies should be made and placed in the notebook where they will be immediately available for use. Transparencies direct the class's attention to the topic of discussion. They should be left on the screen only when topics shown are under discussion.

Instructional Supplements (White Pages) — **Instructor's Edition only**

Instructional Supplements provide suggestions for teaching the basic skills included in each assignment sheet or job sheet. They are located directly behind the upfront materials.

Assignment Sheets (Tan Pages)

Assignment sheets provide students with information and exercises that address learning levels at or above the application level of Bloom's taxonomy. Assignment sheets provide written exercises for instruction and practice of a specific objective. The introduction to the assignment sheet explains how the assignment sheet relates to the subject area and unit component.

Assignment Sheet Answers (Pink Pages) – **Instructor's Edition only**

This component is designed to assist the instructor in evaluating student performance on assignment sheets.

Job Sheet (Blue Pages)

Job Sheets are another important segment of a unit of instruction. The job sheets provide a list of equipment, tools, and materials needed to complete a manipulative or psychomotor skill. They describe a step-by-step procedure to complete each task or job. Diagrams, photographs, and illustration are provided to assist students in achieving the skill.

The instructor should demonstrate the procedure outlined in each job sheet. Furthermore, the instructor needs to localize the procedure according to the equipment and supplies available in the local lab situation. Job sheets also furnish potential employers with a picture of the skills being taught and the performances they might reasonably expect from a person who has had this vocational instruction.

Written Test (Yellow Pages) – **Instructor's Edition only**

This component provides criterion-referenced evaluation of every objective listed in the unit of instruction. If objectives have been added or modified, appropriate changes should be made on the test.

In order to measure and document student competency gains as required by the latest Carl Perkins regulations, and as outlined in the Oklahoma-developed system of standards and measures, it is *absolutely essential* that the same test be used as a pretest and as a posttest. If you choose to use tests other than the ones included herein, be sure that the same instrument is used for each activity–pre- and post test.

A detailed explanation of the Oklahoma plan for standards and measures and the Carl Perkins requirements is included in the CIMC publication, *Measuring Learning & Competency Gain: The Pretest/Posttest Approach*. This booklet and accompanying software designed to assist in calculating and recording student gains are available to all vocational teachers through the school's vocational testing liaison.

To further assist vocational teachers, the CIMC is in the process of developing test code sheets for each written test in its more recent publications, including this one. These code sheets are explained in Section 8 of the publication mentioned above, and will greatly assist in verifying that the test is a valid instrument for measuring student learning and competency gains. As the test code sheets for programs become available, they will be forwarded to teachers of each program; further publications will include the test code sheets.

Written Test Answers (Pink Pages) – **Instructor's Edition only**

This component is designed to assist the instructor in evaluating student performance on written tests.

COMPETENCY PROFILES

A competency profile is available from CIMC Resale for each publication. Competency profiles document student performance. The profile contains a list of the specific job competencies that a student should achieve before leaving the training program.

PAGE NUMBERING

Each publication for the Curriculum and Instructional Materials Center is usually assigned a specific abbreviation. ***Medical-Surgical II*** has not been abbreviated. Each unit will be recognized by the unit number in roman numerals. Each unit in the publication begins with page 1. Each page number gives the component name, book title, unit number, and page number within the unit. Since CIMC publications are loose-leaf, this system of page numbering was adopted so that pages from different manuals would not get mixed up. The page number for the objective sheet in **Apply the Nursing Process to the Care of the Cardiovascular System: Blood**, which is unit VI, would look like this:

OBJECTIVE SHEET · **Medical-Surgical II**
CIMC · VI · 1

METHODS OF DISSEMINATING MATERIAL

For best results, provide student materials for each student. Student workbooks contain objective sheets, information sheets, supplements (optional), assignment sheets, and job sheets. Written tests are packaged separately for students, and can be stored until needed. Students should be allowed to take their materials home at the end of the course.

TEACHING METHODS

Keeping students motivated is a challenge. Supplement the objectives by providing the "why," personal experiences, and current information. If you are going to teach the material in a group setting, prepare for the unit by deciding the best way to teach each objective and allow for student input.

If you are going to follow the plan for individualized instruction, provide opportunities that will allow each student to become involved in planning for and being responsible for his or her own education.

CORRECTIONS AND SUGGESTIONS

The Curriculum and Instructional Materials Center (CIMC) wants to provide vocational instructors and students with accurate and effective materials. Although the CIMC strives to maintain the highest standards of development and production, oversights sometimes do occur. If you find any errors in this or other CIMC publications, or have suggestions for improving their usefulness in vocational programs, please notify the CIMC staff. To do this, please identify the page(s) affected and write any comments to clarify the error or suggestion. Use the spaces below. Then, simply fold (bottom of page *upward*, top *downward*), secure, and mail.

This information will be used to correct the publication before the materials are reprinted. To ensure that the material is updated on a timely basis, notify the CIMC of necessary corrections as soon as possible after discovering the error.

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OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE INTEGUMENTARY SYSTEM

I

INTRODUCTION

The skin is the largest organ of the body, covering the body's entire surface. Skin is comprised of two main layers of tissue. The upper layer, the *epidermis*, contains melanin. The epidermis does not contain blood vessels; tissue fluid provides nutrients. The second layer, the *dermis*, holds the structures of the sweat and oil glands, nails and hairs. Beneath the dermis is the subcutaneous layer, or *fascia*, which provides a means of connecting the skin to surface muscles. The fat in this sheet of tissue insulates the body. The skin functions as protection, a temperature regulator, and a means of obtaining information about the environment.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I.*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the integumentary system and associated nursing processes. In addition, you will demonstrate these competencies by completing Assignment Sheets, Job Sheet, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the integumentary system to their correct definitions.
2. Choose the correct word or phrase to complete statements about miscellaneous benign diseases and disorders of the integumentary system.
3. Choose the correct word or phrase to complete statements about common non-infectious diseases and disorders of the integumentary system.
4. Choose the correct word or phrase to complete statements about common bacterial infectious diseases of the integumentary system.
5. Choose the correct word or phrase to complete statements about common viral infectious diseases of the integumentary system.

6. Choose the correct word or phrase to complete statements about common fungal infectious diseases and disorders of the integumentary system.

7. Choose the correct word or phrase to complete statements about common parasitic infestations, insect bites, and stings.

8. Choose the correct word or phrase to complete statements about neoplasms of the integumentary system.

9. Choose the correct word or phrase to complete statements about burns.

10. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the integumentary system.

11. Develop a teaching plan for patients with diseases and disorders of the integumentary system. (Assignment Sheet 1)

12. Plan care for patients with diseases and disorders of the integumentary system. (Assignment Sheet 2)

13. Assess condition of the skin. (Job Sheet)

APPLY THE NURSING PROCESS TO THE CARE OF THE INTEGUMENTARY SYSTEM

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objective 1, basic information that supports the rest of the unit.

  Part 2 — Objectives 2 and 3, the first two groupings of diseases and disorders of the integumentary system, including benign and non-infectious diseases;

  Part 3 — Objectives 4-7, the next four groupings, including bacterial diseases, viral diseases, fungal diseases, and parasitic infestations, insect bites, and stings;

  Part 4 — Objectives 8-10, the next three groupings, including neoplasms, burns, and pediatric disorders.

- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a guest speaker to discuss diseases and disorders of the integumentary system.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.

- Obtain models and large pictures of the integumentary system.
- Make a poster of diseases and disorders of the integumentary system.

- Make a bulletin board showing structures of the integumentary system.

- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration
  - Assist students to conduct a chapter service project on diseases and disorders of the integumentary system.
  - Develop objectives for service project and identify a theme.
  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.
  - Plan community or school health project that involves disseminating pamphlets about diseases and disorders of the integumentary system.
  - Develop and/or participate in a community teaching project that involves diseases and disorders of the integumentary system.

- This unit is developed to comply with the scope of practice for PNs. Discuss alternative administrative practices and responsibilities that may vary with the location and type of agency.

- Remind students to respect patient confidentiality when discussing personal experiences.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the integumentary system to their correct definitions.

- Discuss terms associated with diseases and disorders of the integumentary system.

- Have students play reinforcement games and work crossword puzzles using terms.

- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about miscellaneous benign diseases and disorders of the integumentary system.

- Have students share relevant incidents about friends or family members who have problems related to benign skin lesions.

- Have students share ideas that might be helpful in evaluating lesions associated with this section.

- Stress that students will use the information in this section to complete the Job Sheet.

Objective 3: Choose the correct word or phrase to complete statements about common non-infectious diseases and disorders of the integumentary system.

- Have students share relevant incidents about friends or family members who have problems related to non-infectious conditions.

- Have students share ideas that might be helpful in evaluating conditions associated with this section.

Objective 4: Choose the correct word or phrase to complete statements about common bacterial infectious diseases and disorders of the integumentary system.

- Have students share relevant incidents about friends or family members who have problems related to bacterial infectious conditions.

- Have students share ideas that might be helpful in teaching patients about cause and prevention.

Objective 5: Choose the correct word or phrase to complete statements about common viral infectious diseases and disorders of the integumentary system.

- Have students share relevant incidents about friends or family members who have problems related to viral infectious conditions.

- Have students share ideas that might be helpful in teaching patients about cause and prevention.

Objective 6: Choose the correct word or phrase to complete statements about common fungal infectious diseases and disorders of the integumentary system.

- Have students share relevant incidents about friends or family members who have problems related to infectious fungal conditions.

- Have students share ideas that might be helpful in teaching patients about causes and prevention.

Objective 7: Choose the correct word or phrase to complete statements about common parasitic infestations, insect bites, and stings.

- Have students share relevant incidents about friends or family members who have problems related to parasitic infestations, bites, and stings.

- Have students share ideas that might be helpful in teaching patients about cause and prevention.

Objective 8: Choose the correct word or phrase to complete statements about neoplasms of the integumentary system.

- Have students share relevant incidents about friends or family members who have problems related to neoplasms.

- Use the information in this section to complete Assignment Sheet 1.

- Have students share ideas related to the care of patients with problems associated with conditions in this section.

Objective 9: Choose the correct word or phrase to complete statements about burns.

- Have students share relevant incidents about friends or family members who have problems related to burns.

- Have students share ideas related to the care of patients with problems associated with conditions in this section.

- Obtain copies of Rule of Nines chart and Lund and Brower chart for students' use.

- Use the information in this section to complete Assignment Sheet 2.

Objective 10: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the integumentary system.

- Have students share relevant incidents about friends or family members who have problems related to pediatric diseases and disorders.

- Have students share ideas related to the care of patients with problems associated with conditions in this section.

APPLICATION

- Make a video or skit having to do with patient care of a person with problems associated with diseases and disorders of the integumentary system. The students can do the presentation, or the teachers can entertain the students.

- Students can practice care of the patient with problems associated with this unit.

- Have students present a one-minute speech on care of a patient with problems associated with the integumentary system.

Objective 11: Develop a teaching plan for patients with diseases and disorders of the integumentary system. (Assignment Sheet 1)

- Use Assignment Sheet 1 to give students an opportunity to practice ideas that will help when they teach a patient with diseases and disorders of the integumentary system.

Objective 12: Plan care for patients with diseases and disorders of the integumentary system. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give students an opportunity to practice ideas that will help when they care for a patient with diseases and disorders of the integumentary system.

- Provide a care plan form for students' use.

Objective 13: Assess condition of the skin. (Job Sheet)

- Use the Job Sheet to give students hands-on experience in assessing the skin condition.

- Use a mannequin to practice and demonstrate procedures in the classroom.

EVALUATION

Pretest

- Give Written Test as pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.
- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.
- Complete appropriate sections of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.

- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

UNIT REFERENCES

- Betz, Cecily Lynn and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). The C.V. Mosby Co.: St. Louis, 1992.
- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St. Louis: Mosby-Year Book, Inc., 1991.
- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). The C.V. St. Louis: Mosby Company, 1989.
- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.
- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.
- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.
- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C.V. Mosby Company, 1990.

INFORMATION SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE INTEGUMENTARY SYSTEM

I

OBJECTIVE 1

Match terms associated with diseases and disorders of the integumentary system to their correct definitions.

- **anaplastic** — Tumor cells that are different from their parent tissue (a sign of malignancy)
- **circumscribed** — A confined area or limited space
- **comedone** — "Blackhead," discolored area formed by plugged oil glands
- **lesion** — General term used to describe circumscribed area of injured or diseased tissue
- **macule** — A flat skin discoloration of various shapes and colors (such as a non-raised rash or a freckle)
- **nodule** — Rounded, solid mass
- **papule** — Small, elevated lesion that contains pus
- **scar** — Fibrous tissue changes from injuries
- **suppuration** — The process of pus formation
- **urticaria** — Pale, clear, itching wheals
- **vesicle** — Small elevated lesion filled with clear fluid
- **wheal** — Transient elevated lesion of edematous tissue

OBJECTIVE 2

Choose the correct word or phrase to complete statements about miscellaneous benign diseases and disorders of the integumentary system.

Description and etiology

Angiomas (birthmarks) — Angiomas, commonly known as birthmarks, are tumors that involve the skin and subcutaneous tissue. They may be raised or flat areas, ranging in color from violet-red to bright red. *Spider angiomas* are a group of venous capillaries that dilate and branch out with a spider-like appearance. *Hemangiomas* are harmless, painless tumors that consist of dilated blood vessels. Angiomas may be surgically removed, covered for cosmetic reasons, or left untreated.

Causes	• Varies
Health care management	• Most angiomas do not require treatment, although they may be removed for cosmetic reasons • Hemangiomas should be removed if they enlarge or become irritated and bleed. • Spider angiomas are associated with liver disease, hypertension, and pregnancy • Surgeries: excision, grafting
ASSESSMENT	**Signs and symptoms**
Angioma	• Raised or flat area of discoloration • Painless • Color ranges from violet-red to bright red

Description and etiology	**Chloasmas** — Patches or spots of yellowish-brown discolored skin that appear with pregnancy, sun or x-ray exposure, and aging (commonly known as "liver spots").
Causes	• External irritants • Ultraviolet light • X-rays • Disease
Health care management	• None (chloasma is a symptom, not an illness)
ASSESSMENT	**Signs and symptoms**
Chloasma	• Rounded or oval patches of discoloration • Colors range from yellow to black, usually yellowish-brown

Description and etiology

Nevus (plural *nevi*) — Common tumors of various sizes, shapes, and colors that may be flat or raised, with or without hair. Nevi are commonly called *moles*. The risk of malignancy exists, so periodic examination is advised. Any new nevus or change in an existing nevus is suspicious.

Causes

- Unknown

Health care management

- Most nevi do not require treatment, although they may be removed for cosmetic reasons or if they become irritated
- Nevi should be observed for any change in appearance (color, size, shape, loss of hair) or development of pain or itching
- Surgeries: excision

ASSESSMENT

Signs and symptoms

Nevus

- Small, circumscribed, raised, discolored spot
- May be flat or raised
- Colors range from yellowish to brown or black

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ANGIOMAS, CHLOASMAS, and NEVI

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	
• Continually monitor patient's condition	• Observe pigmented nevi for any changes
• Plan for patient's discharge	• Prepare teaching plan — Caution against self-treatment

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Ulceration — Loss of epithelial or connective tissue. Skin ulcers are usually caused by ischemia or infection. The size and depth varies greatly. Treatment depends on the cause. Ulcers are easier to prevent than cure — preventive measures, such as position changes, are very important.

Causes

- Pressure (decubitus ulcer)
- Venous disorders (stasis ulcer)
- Infection (*streptococci* and/or *staphylococci*)

Health care management

- Treatment of underlying condition
- Prevent infection
- Massage *around* the site of the ulcer, not directly on the affected area
- Keep the area clean according to physician's orders
- Surgeries: grafting

ASSESSMENT

Ulceration

Signs and symptoms

- Loss of surface tissue
- Decubitus ulcers:
  - Occur over bony prominences
  - Early symptoms: warm, reddened area that blanches with fingertip pressure, numbness
  - Cyanotic area that does not blanch on pressure
  - Blistering (vesicles)
  - Broken skin
- Stasis ulcers:
  - Painful, tender, reddened area
  - Itching
  - Edema

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ULCERATIONS

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions
Check medication record	
Collect equipment	
Promote healing	Treat underlying cause Provide nutritious diet Provide proper skin care Turn q 2 hours Use therapeutic mattress and/or bed Perform range-of-motion exercises Perform intense integumentary toilet
Continually monitor patient's condition	
Plan for patient's discharge	Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about common non-infectious diseases and disorders of the integumentary system.

Description and etiology

Psoriasis — An inflammatory skin disease specifically affecting the extensor surfaces of the body and scalp. The epidermal cells multiply too rapidly, causing circular, scaly patches of skin. Genetic makeup or environmental exposure triggers the onset. Anxiety and emotional stress can aggravate the condition. Psoriasis cannot be cured. This condition improves, then reoccurs throughout life.

Causes

- Unknown (genetic factors may be involved)

Health care management

- Patient education: Psoriasis is a chronic disease. Discuss treatment options and side effects. Because of the recurrent nature of psoriasis, some patients may be tempted to experiment with non-prescribed remedies. Emphasize that self-treatment is costly and may only exaggerate their symptoms. Discuss stress control techniques and trauma prevention to help prevent recurrences.
- The purpose of treatment is to provide symptomatic relief.
- Medications: Bland emollients to hydrate skin and remove scales, topical steroids (may cause rebound psoriasis when discontinued), coal tar preparations, PUVA therapy (photochemotherapy with ultraviolet light — may cause cancer, especially in light-skinned persons or those previously exposed to x-ray therapy), anthralin products, anti-neoplastics (for severe psoriasis — can cause liver damage.)

ASSESSMENT

Signs and symptoms

Psoriasis

- Elevated, circumscribed, red plaques with silvery scales; occur primarily on scalp, knees, elbows, and trunk
- In dark-skinned patients, plaques may appear purple
- Nails may be yellow, pitted, separated from nail bed

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PSORIASIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Find out if patient has been self-medicating
• Collect equipment	
• Promote healing	• Apply topical medications thickly over plaques, thinly over other areas • Caution patient to avoid direct exposure to sunlight if necessary
• Continually monitor patient's condition	• Monitor patients taking methotrexate for hematologic, renal, and liver functioning

• Plan for patient's discharge	• Develop teaching plan • Gather teaching materials • Plan uninterrupted instructional time • Assess patient's knowledge of disease, correct any knowledge deficit and/or misinterpretation • Teach patient how to use medications • Discuss stress management techniques

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NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Contact dermatitis** — An inflammation of the derma resulting from contact with a primary irritant or from sensitization to a medium.
Causes	• Contact with irritants • Hypersensitivity to external agents
Health care management	• Identify and remove the substance causing the reaction. • Medications: Topical treatment of lesions, sedatives and antihistamines if necessary to relieve burning and itching, systemic antibiotics if infection is present, systemic steroids for widespread dermatitis.
ASSESSMENT	**Signs and symptoms**
Contact dermatitis	• Itching, burning, redness, vesicles, local edema at point of exposure to causative agent • Later symptoms include oozing, crusting, scaling, drying, thickening of skin

Description and etiology

Seborrheic dermatitis — A chronic inflammatory disease of oily skin areas. Hormones, nutritional status, stress, infection and genetic makeup are predisposing factors. There is no known cure. Scaly patches appear on the skin, and dry powdery deposits (dandruff) appear on the scalp. This condition arises from an overproduction of oil in areas where there are large numbers of sebaceous glands: on the face, scalp, folds of the skin and other areas.

Causes

Unknown (genetic factors may be involved)

Health care management

- Remove external irritants, heat and perspiration.
- Symptomatic relief.
- Medications: Shampoo with selenium sulfide or coal tar for scalp, topical corticosteroids for severe skin lesions

ASSESSMENT

Signs and symptoms

Seborrheic dermatitis

- Dry, flaky scalp (dandruff), itching, scales, pink or yellow patches
- Appears in skin folds or areas of increased sebaceous gland activity (face, scalp, chest, back, ears)

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

DERMATITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Physician may order discontinuation of medications that may be causing reaction
• Collect equipment	
• Promote healing	• Provide symptomatic relief (medication, baths, cold compresses, lotions)
• Continually monitor patient's condition	• Watch for signs of infection • Assess degree of pruritus and discomfort

• Plan for patient's discharge	• Develop teaching plan – Patients with allergies to drugs should wear a medical alert bracelet or necklace – Instruct patient on proper nutrition – Stress the need to avoid scratching lesions

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NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 4

Choose the correct word or phrase to complete statements about common bacterial infectious diseases and disorders of the integumentary system.

Description and etiology

Impetigo — An acute superficial infection of the skin characterized by the formation of multiple vesicles that rupture, forming a yellowish crust. This contagious disorder affects all ages, but is common in children. Impetigo is often associated with poor hygiene, malnutrition, and other skin conditions.

Causes

- *Staphylococcus* infection
- *Streptococcus* infection

Health care management

- Treatment focuses on keeping the skin clean and administering antibiotics (systemic and/or topical)
- Instruct patient in proper nutrition and personal hygiene
- Keep the patient's fingernails short and clean to prevent excoriation
- Patient should be kept in contact isolation — the fluid from the vesicles is infective

ASSESSMENT

Signs and symptoms

Impetigo

- Small red macules become thin-walled vesicles
- Vesicles rupture and form yellowish crust, which is easily removed

- Usually appears on face, may also appear on hands, neck, extremities

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

IMPETIGO

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions • Keep patient in contact isolation
• Check medication record	
• Collect equipment	
• Promote healing	• Use soaks or warm compresses at least 3 times a day to remove crusts • Apply topical antibiotics after crust removal
• Continually monitor patient's condition	
• Plan for patient's discharge	• Prepare teaching plan – Patient should not share towels and washcloths with others in the same household – Patient and others in household should bathe daily with antibacterial soap – Instruct patient in proper nutrition and personal hygiene

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Furuncles (boils) — Acute localized infection of tissue, skin, gland, or hair follicle. Furuncles may rupture spontaneously or be surgically incised and drained. These painful lesions appear anywhere on the body, but are most often found on the back of the neck, buttocks, and axillae. A *carbuncle* is a cluster of furuncles, involving two or more follicles. Carbuncles are most often found on the back of the neck and the buttocks.

NOTE: People with undetected or inadequately controlled diabetes mellitus are particularly susceptible to carbuncles. Patients past middle age who develop carbuncles should be checked for diabetes.

Causes

- *Staphylococcus* infection

Health care management

- Infected area must be protected from irritation, trauma, and squeezing or handling.
- Apply warm compresses to affected area.
- Protect surrounding skin areas by cleansing with antibacterial soap and applying antibacterial ointment.
- Patient and other household members should have separate towels and bathe daily with antibacterial soap.
- Patient should use separate washcloth when cleaning affected area.
- Systemic antibiotics may be prescribed to control the spread of infection.

ASSESSMENT

Signs and symptoms

Furuncles

- Early: local swelling and redness, severe local pain
- Lesion becomes elevated ("points up") in 3 to 5 days, center becomes boggy, yellow or white head appears.

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

FURUNCLES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions • Hospitalized patients should be kept in wound isolation
• Check medication record	
• Collect equipment	
• Promote healing	• Use warm wet dressings — these may be discontinued when drainage begins • Protect surrounding skin • Administer antibiotics as prescribed
• Continually monitor patient's condition	
• Plan for patient's discharge	• Prepare teaching plan – Teach patient and family to prevent the spread of infection by using separate towels, antibacterial soap, proper handling and disposal of contaminated materials

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about common viral infectious diseases and disorders of the integumentary system.

Description and etiology

Herpes simplex — Two similar strains of the herpes simplex virus cause two different conditions. Type 1, the most common, causes lesions of the mouth, eye, and brain. Type 2 causes lesions in the genital area. Herpes simplex is self-limiting; no cure is currently available.

Causes

- *Herpes hominis* virus (also known as herpes simplex virus or HSV)

Health care management

- Symptomatic relief
- Patient education to prevent spreading virus to others (genital herpes)
- Medications: antiviral agents, analgesics

ASSESSMENT

Signs and symptoms

Herpes simplex

- Type 1 — vesicle on mouth, nose, eye, or lips (cold sore or fever blister)
- Type 2 — vesicles, burning pain, itching in the genital area
- Malaise
- Edema of surrounding area

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HERPES SIMPLEX

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide symptomatic relief • Keep lesions dry
• Continually monitor patient's condition	
• Plan for patient's discharge	• Prepare teaching plan — Patients with genital herpes simplex must take care to avoid infecting sexual partners (the patient is only contagious during an outbreak) — Genital herpes can be transmitted from mother to baby during vaginal delivery; cesarean delivery may be indicated for pregnant women with herpes

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Herpes zoster (shingles) — A painful inflammatory condition of the spinal ganglia. Herpes zoster is caused by the same virus that causes chicken pox. The condition is often incorrectly blamed on nerves or mental stress, although a lowered resistance to infection may lead to an outbreak.

Causes

- *Varicella* virus

Health care management

- Pain relief
- Medications: analgesics (narcotic analgesics may be used for severe pain), steroids, antiviral agents, tranquilizers
- People who are not immune to chicken pox or have lowered resistance to infection should not care for persons with herpes zoster

ASSESSMENT

Herpes zoster

Signs and symptoms

- Rash of small vesicles along the pathway of a spinal nerve
- Sharp burning pain
- Severe itching
- General malaise
- Condition usually appears on only one side of the body

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HERPES ZOSTER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pain relief as needed • Use lotions and/or steroids to relieve itching and inflammation • Prevent excoriation and infection — Patient's fingernails should be kept short — Maintain aseptic conditions
• Continually monitor patient's condition	• Watch for signs of infection • Assess the skin for open lesions or excoriation
• Plan for patient's discharge	• Prepare teaching plan – Stress the need to continue using ointment until lesions are gone

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology	**Warts (verrucae)** — Benign skin growths that result from a viral infection. *Plantar warts* are painful warts on the soles of the feet that grow inward. *Anogenital warts*, which may be spread by sexual activity, often cause itching. Warts may disappear spontaneously or may be surgically removed.
Causes	• Viral infection
Health care management	• Anogenital warts and plantar warts are usually removed surgically; treatment is not necessary for other warts, although they may be removed for cosmetic reasons • Topical medications may be used to dissolve warts

- Warts may reappear (especially after cryosurgery) until the patient builds up an immunity to the virus
- Surgeries: cryosurgery, electrodesiccation

ASSESSMENT **Signs and symptoms**

Warts
- Small, circumscribed lesion
- Usually appear on hands
- Plantar warts: no skin lines on the surface of the wart
- Anogenital warts: cauliflower-like growths, pale color, may cause itching

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

WARTS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist in removal
• Continually monitor patient's condition	
• Plan for patient's discharge	• Prepare teaching plan — Patient may have knowledge deficit concerning causes of warts and methods of transmission and removal

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION
- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about common fungal infectious diseases and disorders of the integumentary system.

Description and etiology

Tinea — Chronic fungal infection. *Tinea-pedis* (athlete's foot) is characterized by a superficial scaly, dusky rash between the toes and on the soles of the feet. *Tinea-corporis*, commonly known as ringworm, is a fungal infection of the exposed areas of the body. *Tinea-capitis*, also known as ringworm, affects the scalp. *Tinea-cruris* (jock itch) is a fungal infection of the groin, inner thighs, and buttocks that often affects people who are obese or wear tight clothing. *Tinea-unguinum* is a chronic infection of the toenails and fingernails.

Causes

- Fungal infection

Health care management

- Teach the patient preventive actions
- Medications: topical antifungal medications, oral antifungal antibiotic for serious infections

ASSESSMENT

Signs and symptoms

- Tinea-pedis
  - Cracks between toes, scaly rash, vesicles
  - Itching and burning
  - Nails may become discolored, thickened, or distorted
- Tinea-corporis and tinea-cruris
  - Red macule (early symptom)
  - Rings of vesicles filled with clear fluid which appear in clusters
  - Intense itching
- Tinea-capitis
  - Round, reddened, scaling lesions with pustules at edges
  - Hair breaks off at or near the scalp
- Tinea-unguinum
  - Thick, deformed nails
  - Separation of nail from nail bed

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

FUNGAL INFECTIONS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Apply topical medications as prescribed
• Continually monitor patient's condition	
• Plan for patient's discharge	• Prepare teaching plan – Instruct patient to keep feet clean and dry – Discuss proper personal hygiene – Infected pets may spread infection and should be treated – Tight clothing may contribute to infection – Patients with tinea-unguinum must continue taking medications for a year or more

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 7

Choose the correct word or phrase to complete statements about common parasitic infestations, insect bites, and stings.

Description and etiology

Pediculosis — An infestation of lice. In *pediculosis capitis* (head lice), the female louse lays her nits (eggs) close to the scalp on the hair shafts. Head lice are spread through the sharing of hats, brushes, or combs. Because this condition is contagious and spreads rapidly combs, hats, brushes, and bedding must be washed. Head lice infestation is **not** a sign of poor hygiene. The *pediculosis corporis* (body louse) lives chiefly in the seams of undergarments and other clothing. Their bites cause hemorrhage points on the back, trunk, shoulders, and buttocks. The female *pediculosis pubis* (crab louse) lays her eggs on the hair shaft close to the skin, primarily in the pubic areas. Infestation is usually in the genital region, but may also be present on the hairs of the chest, axillae, beard, and eyelashes. Infestation is spread through sexual contact and contaminated bedding and towels. Because of the contagious nature, the sexual partner or partners must be notified and treated.

Causes

- Lice infestation

Health care management

- Pediculicides are applied topically
- Use a fine-toothed comb to remove nits
- Use petroleum jelly to smother and remove lice from eyelashes and eyebrows

ASSESSMENT

Signs and symptoms

- Pediculosis capitis
  - Tiny white nits attached to hair shafts (usually on hair at the back of the head or behind ears) that cannot be brushed off
  - Itching
- Pediculosis corporis
  - Minute hemorrhagic points
  - Excoriation of affected areas
  - Itching
- Pediculosis pubis
  - Itching
  - Nits may be seen attached to hair shaft

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PEDICULOSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Apply topical medications and administer systemic medications as prescribed • Use a fine-tooth comb to remove nits • Nits on eyebrows or eyelashes should be smothered with petrolatum jelly and removed with tweezers • All members of the household must be treated simultaneously
• Continually monitor patient's condition	• Watch for signs of infection, dermatitis
• Plan for patient's discharge	• Prepare teaching plan – Discuss preventive methods – All clothing, towels, and bedclothes must be washed in hot water, dry cleaned, or placed in sealed plastic bags for one month

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Scabies — Infestation by the itch mite. The adult female burrows into the superficial layer of skin, lays her eggs, and dies. The larvae hatch and migrate to the skin surface, causing severe itching. Small, raised, straight burrows or wavy, brown or black thread-like lesions may be visible. Scabies is not a sign of poor hygiene or promiscuity. However, the increased numbers of sexually active people living in substandard conditions and using poor hygiene contribute to the increased incidence of scabies.

Causes

- Itch mite infestation

Health care management

- Topical treatment with scabicide
- Symptomatic relief

ASSESSMENT

Signs and symptoms

Scabies

- Classic symptoms:
  - Lesions that resemble brown or black threads
  - Itching (may intensify at night)
  - Lesions usually appear on waist, elbows, knees, feet, axillae, penis, scrotum, nipples, between fingers, and under breasts
- Scabies may exhibit symptoms of other disorders rather than classic scabies symptoms — positive diagnosis can be made by examining a skin scraping and identifying the itch mite

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

SCABIES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Apply topical medication as prescribed • All external body areas must be covered by the medication, including the umbilicus and the soles of the feet • All members of the household must be treated simultaneously, even if asymptomatic
• Continually monitor patient's condition	• Watch for signs of infection
• Plan for patient's discharge	• Prepare teaching plan – All clothing, towels, and bedclothes must be washed in hot water, dry cleaned, or stored in sealed plastic bags for one month – Teach patient to apply medication

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Spider bites — Not all spider bites are dangerous. The two major types of dangerous spiders in North America are the black widow and brown recluse (also known as *fiddleback*) spiders. Patients who are bitten by a spider should take the spider to their physician, if possible.

Causes

- Bite from poisonous spider

Health care management

- Black widow
    - An antivenin is available for patients who are not sensitive to horse serum
    - Apply cold compress to bite area
    - Pain relief
- Brown recluse
    - No antivenin currently available, treatment is symptomatic (experiments are being conducted on an antivenin)
    - Apply cold compress to bite area
    - Medications: steroids, antibiotics, antihistamines, anti-inflammatory agents

ASSESSMENT

Signs and symptoms

Spider bites

- Black widow

  NOTE: Because the venom causes severe abdominal pain, the patient may initially seem to have an acute abdominal condition

    - Systemic reaction
    - Initial sting feels like a pinprick, pain subsides after a short time
    - Abdominal muscles become rigid
    - Abdominal cramps
    - Motor paralysis

- Brown recluse
  - — Local reaction
  - — Reddened area
  - — Itching
  - — Large area of necrosis at site of bite

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

SPIDER BITES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide symptomatic relief for itching, pain • Black widow: — Apply cold compress — Force fluids — Give antivenin IM — Avoid all stimulants • Brown recluse: — Apply cold compress
• Continually monitor patient's condition	
• Plan for patient's discharge	• Discuss preventive methods

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Stings — Certain individuals are extremely sensitive to the venoms of bees, hornets, yellowjackets, and wasps. Edema, urticaria, and itching, are apparent in local reactions. A local infection may occur at the site of the sting. Exposed areas are easy targets; the head and neck are frequent sites. Systemic reaction can result in anaphylaxis, malaise, anxiety, bronchospasm, shock, and death.

Causes

- Reaction to insect poison

Health care management

- Symptomatic relief
- Anaphylactic reaction is a medical emergency: death may occur within minutes without medical attention
- Medications: antihistamines, cortisone, analgesics

ASSESSMENT

Signs and symptoms

Stings

- Local reaction:
  - — Reddened area
  - — Pain
  - — Itching
- Anaphylactic reaction:
  - — Red streak along affected limb
  - — Drop in blood pressure
  - — Dyspnea, wheezing
  - — Edema of face, lips, hands, other body parts
  - — Urticaria

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

STINGS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Check for evidence of hypersensitivity (previous reaction, medical warning bracelet)
• Collect equipment	
• Promote healing	• Provide symptomatic relief • Apply cold compress
• Continually monitor patient's condition	• Watch for signs of anaphylactic shock
• Plan for patient's discharge	• Prepare teaching plan — Discuss avoidance techniques — Emphasize the need for hypersensitive patients to wear a medical warning bracelet and/or carry an allergy kit at all times — Discuss desensitization therapy

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 8

Choose the correct word or phrase to complete statements about neoplasms of the integumentary system.

Description and etiology

Basal cell carcinoma — Tumor cells occurring in the epidermis. This is the most common type of skin cancer. Basal cell carcinoma occurs more frequently in older people, fair-skinned individuals, and people who have prolonged exposure to the sun. Males are usually affected more often than females. This type of skin cancer rarely metastasizes.

Risk factors

- Fair complexion
- Prolonged exposure to sunlight or radiation therapy
- Pigmented nevi
- Exposure to certain chemicals (arsenic, nitrates, oils, paraffins, tar, pitch)

Health care management

- The method of removal depends on the location and type of tumor.
- Patient education for early detection or prevention of future tumors.
- Surgeries: curettage, electrodesiccation, chemosurgery, cryosurgery

ASSESSMENT

Basal cell carcinoma

Signs and symptoms

- Small, shiny nodule with pale border and central ulcer or depression
- Crusting and dilation of end blood vessels
- Usually occurs on skin areas that are exposed to sun

Description and etiology

Squamous cell carcinoma — Anaplastic cells that occur in the thin, flat layer of epithelium. The squamous cell carcinoma appears on the lower lip, ears, neck, dorsum of hands, oral mucous membranes, and on the glans penis of uncircumcised males. The growth rate is very rapid, and the cancer may metastasize to other areas.

Risk factors

- Prolonged exposure to sunlight
- Exposure to irritants (smoking, poorly fitting dentures, cheek biting)

Health care management

Same as basal cell carcinoma

ASSESSMENT

Squamous cell carcinoma

Signs and symptoms

- Rough, thick, scaly nodule
- May show ulceration or crusting
- Base may be hardened or inflamed

Description and etiology

Malignant melanoma — Malignant tumor composed of anaplastic melanocyte. Malignant melanomas can appear on birthmarks and mole sites that are repeatedly irritated. They can have a variety of appearances, but the darker brown and black nevi are more likely to become malignant. The area itself can appear in various colors. Malignant melanoma is the most serious type of skin cancer.

Risk factors

- Fair skin
- Familial history of melanomas

Health care management

- Immunotherapy and/or chemotherapy if metastasis has occurred
- Surgeries: same as basal cell carcinoma, skin grafting may be required

ASSESSMENT

Signs and symptoms

Malignant melanoma

- Macules or nodules with variegated color and/or irregular border
- White area within a pigmented lesion
- Change in color, size, symmetry, surface characteristics, or shape of a pigmented nevi
- Pigmented nevi that loses hair or develops itching, tingling, tenderness, and/or pain
- Grainy, pebbly texture

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CARCINOMAS AND MELANOMAS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide care for patients receiving chemotherapy or radiation therapy
• Continually monitor patient's condition	
• Plan for patient's discharge	• Prepare teaching plan • Discuss support systems • Neoplasms tend to recur — discuss detection and prevention methods — Protect skin from sun exposure — Watch for any new mole or change in an existing mole

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology	**Actinic (senile) keratosis** — Horny growths on the skin of the face, ears, or hands, usually occurring in older persons. These keratoses are a result of chemical changes in the skin of persons who are exposed to sunlight, x-rays, or ultraviolet light. Actinic keratosis should be observed carefully — approximately 25% of these lesions develop into squamous cell carcinoma.
Causes	• Exposure to sunlight or other irradiation
Health care management	• Lesions may be treated with topical medications. • Surgeries: curettage, electrodesiccation, excision

ASSESSMENT	**Signs and symptoms**
Actinic keratosis	• Round or irregular, dry, scaly lesions • Color ranges from red-brown to gray • Surrounding skin often shows signs of overexposure to the sun (dry, wrinkled)

Description and etiology	**Seborrheic keratosis** — Benign tumors that resemble large, dark, greasy warts. These are the most common kinds of skin tumors in middle-age and older persons.
Causes	Unknown
Health care management	• Seborrheic keratosis rarely becomes malignant • Lesions may be removed for cosmetic reasons or if they become irritated • Surgeries: curettage, electrodesiccation, cryotherapy
ASSESSMENT	**Signs and symptoms**
Seborrheic	• Large lesions that feel greasy or velvety • Color ranges from tan to black • Usually appear on the trunk, but may also appear on the face and scalp.
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

KERATOSES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care as indicated • Apply topical medications if indicated • Provide follow-up care
• Continually monitor patient's condition	• Observe actinic keratosis for signs of malignancy — Inflammation — Rapid increase in size
• Plan for patient's discharge	• Prepare teaching plan — Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 9

Choose the correct word or phrase to complete statements about burns.

Description and etiology

First-degree (superficial partial thickness) — involves only the epidermis and does not cause blistering. Patients are not usually admitted into the hospital. Emergency treatment can be done at home. Wet, cool compresses can be administered with the aid of family members or friends if needed.

Causes

- Flash flame
- Ultraviolet light (sunburn)

Health care management

- Immediately submerge burned areas in cold water (approximately 50° F)
- Pain relief
- Infection control
- Medications: pain relievers, antibiotics, tetanus prophylaxis

ASSESSMENT

Signs and symptoms

First-degree burn

- Redness
- Pain
- Edema may be present
- Burned area blanches with fingertip pressure; color returns when pressure is removed

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Description and etiology

Second-degree (deep partial-thickness or deep dermal) — Involves both the epidermis and dermis. These burns usually heal with little or no scarring, but deep dermal burns may require grafting for cosmetic purposes. Emergency treatment can be given at home, or in the doctor's office if necessary. Wet, cool compresses can be administered with the aid of family members or friends if needed.

Causes

- Contact with hot liquids or solids
- Flash flame to clothing
- Direct flame
- Chemicals
- Ultraviolet light

Health care management

- Same as first-degree burns
- Surgeries: skin grafts
- Medications: tetanus prophylaxis, antibiotics

ASSESSMENT

Second-degree burns

Signs and symptoms

- Extreme pain
- Large, moist vesicles
- Color is mottled with white, tan, pink, or cherry pink areas
- Burned area blanches with fingertip pressure, color returns when pressure is removed

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Description and etiology

Third-degree (full-thickness)—Involves the epidermis, dermis, and underlying tissue. Skin and tissue are damaged or destroyed. After initial severe pain, the burn may be painless because the nerve endings have been destroyed. The area appears charred or white and lifeless, and may require grafting for adequate coverage of area.

Causes

- Contact with hot liquids or solids
- Direct contact with flame
- Chemicals
- Electrical contact

Health care management

- Pain relief, infection control
- Rehabilitation and prevention of mobility limitations
- Medications: analgesics, antiseptics, salicylates, povidone-iodine, silver nitrate, tetanus prophylaxis, antibiotics
- Surgeries: skin grafts, escharotomy, surgical debridement

ASSESSMENT

Third-degree burns

Signs and symptoms

- Little or no pain
- Skin color may be white, charred, dark tan, black, red
- Skin is dry with leathery *eschar* (covering of dead tissue and exudate that forms after burn injury)
- Charred blood vessels are visible

	• Burned area does not blanch with finger pressure • Thin-walled vesicles may be present • Hair easily pulled out
Description and etiology	**Fourth-degree (full-thickness and underlying structures)** — Involves all layers of skin and tissue, with damage to fascia, muscle, tendon, and bone, causing deformity and extensive scarring. The area requires other corrective surgery, as well as grafting, and extensive rehabilitation. Electrical burns are characteristically deep, involving not only the skin but underlying tissues down to and including bone tissue.
Causes	• Same as third-degree burns
Health care management	• Same as third-degree burns
ASSESSMENT	**Signs and symptoms**
Fourth-degree burns	• Same as third-degree burns with additional destruction of epithelium, fat, muscles, and bone
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

BURNS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care • Use Rule of Nines and burn chart to indicate burned areas for patient's record • Determine patient's pre-burn weight (ask relatives and friends, if necessary)
• Plan for safety	• Use universal precautions
• Check medication record	• Check immunization history, especially tetanus
• Collect equipment	
• Promote healing	• Determine extent of injury • Provide pain relief • Provide wound care — Keep burned areas clean — Debride eschar as needed — Apply antibiotics as needed — Use aseptic technique • Provide nutritional support • Provide range-of-motion exercises as needed
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor fluid and electrolyte balance • Watch for signs of infection • Monitor intravenous fluids • Observe for complications — Shock — Curling's ulcer
• Plan for patient's discharge	• Prepare teaching plan — Teach patient proper use of dressings, burn garments, etc.

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 10

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the integumentary system.

Description and etiology

Atopic eczema (infantile eczema) — An inflammatory condition in genetically hypersensitive skin, usually occurring between the ages of two months and two years. Eczema is not a disorder in itself, but a symptom of exposure to allergens.

Causes

- Exposure to allergens
  - — Foods
  - — Environmental inhalants
  - — Pollens
  - — Other substances

Health care management

- Symptomatic relief
- Tests to determine which substances cause allergic reaction
- Avoidance of causative factors
- Prevent infection
- Medications: corticosteroids, antibiotics
- Children with eczema are at risk of infection, especially from the herpes simplex virus — persons with cold sores or fever blisters should not care for children with eczema

ASSESSMENT

Signs and symptoms

Atopic eczema

- Red, weeping lesions
- Oozing and crusting
- Itching

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ATOPIC ECZEMA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide symptomatic relief — Ointments to relieve itching — Wet soaks — Cold compresses • Remove allergens from environment • Prevent infection
• Continually monitor patient's condition	• Watch for signs of infection
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Chickenpox (varicella)** — A common communicable viral infection. Chickenpox is not a serious disease, but complications may occur.
Causes	• *Varicella* virus
Health care management	• Symptomatic relief • The child is contagious until every lesion has dried and formed a crust (six days to three weeks) • Keep child's fingernails short to prevent scratching • Picking at crusts may cause scars

ASSESSMENT	**Signs and symptoms**
Chickenpox	- Low-grade fever - Malaise - Itching rash of vesicles appearing on head, mucous membranes, and trunk
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

CHICKENPOX

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Keep child from scratching lesions • Apply anti-pruritic lotions • Trim fingernails
• Continually monitor patient's condition	
• Plan for patient's discharge	• Child is contagious until the last lesion has dried and formed a crust

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	- Re-assess patient, report any changes. - Assess vital signs again, report any changes. - Contribute to plan of care update.

Description and etiology

Pediatric fungal infections — The *candida albicans* fungus causes *oral candidiasis* ("trench mouth") or *candidal diaper dermatitis* in newborns and infants. Infants who are sick and/or on antibiotic therapy are particularly susceptible.

Causes

- *Candida albicans* fungus (often transmitted through a maternal vulvovaginal infection)

Health care management

- Diaper dermatitis: keep diaper area clean and dry, make sure anything that touches the diaper area (including the caregiver's hands) is clean
- Oral candidiasis: make sure anything that comes into direct or indirect contact with the infant's mouth is clean
- Medications: antifungal agents, antibiotics

ASSESSMENT

Signs and symptoms

Fungal infections

- Diaper dermatitis: red, scaly rash on buttocks, moist patches with pustules
- Oral candidiasis: white plaques on oral mucous membranes, gums, and tongue

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PEDIATRIC FUNGAL INFECTIONS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Apply medications as prescribed • Keep diaper area clean and dry • Keep objects that come into contact with affected area clean
• Continually monitor patient's condition	• Watch for signs of enteric infection

• Plan for patient's discharge	• Prepare teaching plan • Teach parents prevention techniques — Keep diaper area clean and dry — Change soiled diaper as soon as possible — Avoid powders and oil on diaper area — Do not use plastic coverings or double diapers — Practice good handwashing techniques — Make sure anything that comes into contact with the mouth or diaper area is clean

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NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

DIAGNOSTIC PROCEDURES

Allergy test — Minute amounts of material (antigen) are placed in or on the skin. A reaction indicates that the person has been exposed to, or is allergic to, the tested material.

Biopsy — Examination of excised tissue. Carcinomas and melanomas are diagnosed by biopsy.

Culture — Tissue cells are collected from the patient and grown in a nutrient medium, such as agar or gelatin. The cultured cells are assessed for the presence of a suspected organism. This procedure is used to diagnose herpes simplex, herpes zoster, impetigo, folliculitis, and furuncles.

Scraping — Areas of skin are scraped and the scrapings examined under a microscope. This procedure is used to diagnose scabies and fungal infections.

Wood's light — Ultraviolet light used to detect fluorescent materials produced by certain diseases. For example, hairs that are infected with tinea capitis will fluoresce blue-green under ultraviolet light.

SURGICAL PROCEDURES

Chemical planing — Chemical application to the skin for the purpose of destroying superficial layers of the epidermis and upper levels of dermis. A chemical and mechanical action removes tattoos. This is a painful treatment, and is not considered corrective surgery. Treatment improves extensive scarring on the face from acne, and restores the epidermis and dermis where abnormal pigmentation has occurred.

Cryosurgery — Procedure in which tissue is exposed to temperatures of 20° below zero. Areas of cell injury and destruction can be visualized using a probe containing liquid nitrogen to produce the cold. This treatment is useful in malignant tumors, to control pain, and bleeding.

Curettage — A *curet*, a spoon-shaped surgical instrument, is used to scrape away tissue under local anesthesia. This procedure is often used to remove keratoses, leukoplakia, warts, and nevi.

Debridement — Removal of dead tissue or foreign material from a wound.

Excision — Surgically cutting away tissue.

Electrodesiccation (cauterization) — Use of an electric current to remove tissue and control bleeding. Local anesthesia is usually used. Electrodesiccation may be used after curettage to stop bleeding.

Escharotomy — Eschar may cut off circulation in a patient with serious burns, especially when the eschar completely encircles a limb or the chest. In an escharotomy, eschar is either removed or cut into a grid pattern to allow expansion of the tissues beneath.

Grafting — A piece of living tissue is taken from its original site and transferred to another site. Autografts are transfers from the same person. Allografts are transfers from another person, and are usually temporary. Xenografts are transfers from animals to humans. Grafts are performed to repair defects and malformations, and to restore or prevent loss of function.

Laser — Pigment in the dermis absorbs laser light and converts it to heat, followed by selective destruction of specific lesions. This treatment spares destruction of adjacent dermal tissues, and lesions heal with minimal scaring.

Plastic surgery — Often performed to improve one's self-image, cosmetic surgery is expensive, painful, and its results may be temporary.

- **Rhinoplasty** is the most common type of surgery, and is done to improve the shape of the nose. The operation takes almost two hours. Bone and cartilage are removed and the nose is reshaped. Afterward, the patient has a nasal splint, packing, and a foam rubber dressing. Edema is common.

- **Rhytidoplasty** ("face lift") is done to remove wrinkles. The loose skin is tightened during a two-hour surgery. Afterward, the patient has pressure dressings that are removed after two days. Bed rest and quiet are encouraged to minimize trauma to the operative area. Edema, bruises, and distortion of the tissue are common. The improvements last about 5 to 10 years.

Surgical planing (dermabrasion) — Surgical removal of a superficial portion of the skin. This procedure smooths and improves the color of transplanted or grafted skin and facial disfigurements from scars, acne, trauma, freckles, chickenpox, and benign tumors. The epidermis is scraped and sandpapered, but the dermis is preserved to allow healing.

ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE INTEGUMENTARY SYSTEM

Name ______________________________ Score ________

OBJECTIVE 11

Develop a teaching plan for patients with diseases and disorders of the integumentary system.

INTRODUCTION

Patients with neoplasms of the skin often face painful surgery and possible disfigurement. Not only do these patients have concerns about their disease, but also embarrassment and low self-image from its effects. Anxiety and depression causes insomnia, so patients seek ongoing medical assistance to cure or correct the condition. Nurses need to give supportive care, be patient, and give encouragement. Teaching patients about disease maintenance, causes, and preventative measures will be nursing responsibilities.

The incidence of cancer is increasing. Because skin surfaces are visible, detecting skin neoplasms is relatively easy. Therefore, most problems can be successfully treated. The leading cause of skin cancer is directly related to the amount of sun exposure. The effects of sun exposure are cumulative, and emphasis on suntanning has increased the incidence of cancer. Fair-skinned people are at higher risk than those who are dark skinned and have more melanin in their skin, which seems to protect the underlying tissue. Those who work outside, the elderly with sun-damaged skin, and those who work with chemical agents are also in the at-risk group.

Scenario

Margaret Ripley is a 52-year-old who has been sunbathing since she was a teenager. She loves to work in her garden, especially now that she is taking care of her five-year-old granddaughter. Margaret and her granddaughter spend several hours a day working in the yard each summer.

Recently, Margaret noticed some changes in a mole on her leg. Its original dark brown color had changed to a bluish brown, and its texture had become grainy. Her doctor diagnosed her condition as a malignant melanoma and scheduled surgery for her. She was admitted to the hospital last week, and is now ready for discharge. She is your patient.

DIRECTIONS

In this assignment you are given a case study of a patient. Use the scenario or a clinical patient to complete your teaching plan. Use additional medical-surgical resources to research the condition in more depth and to help you decide on a teaching plan.

1. What will you do to prepare the patient for the teaching session?

2. What materials, supplies, or equipment will you need?

3. What will you tell her about causes, health care management, and preventative measures? Outline the teaching plan below.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records
- Use content area vocabulary

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

ASSIGNMENT SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE INTEGUMENTARY SYSTEM

Name ________________________________ Score ________

OBJECTIVE 12 **Plan care for patients with diseases and disorders of the integumentary system.**

INTRODUCTION

More than two million people sustain burn injuries each year. Over 25% require hospitalization or outpatient treatment. Many of these injuries could be prevented. Nurses are in a position to teach safety and prevention.

Patients admitted with burns need cold water applications with cold towels to reduce edema and damage and to give immediate pain relief. Covering the burn quickly will minimize contamination and prevent contact with air, which also reduces pain.

The nurse should assess the burn to determine the extent of damage. The Rule of Nines chart and the Lund and Brower chart may be used to evaluate the burn area.

Observe the patient for shock due to loss of fluid, the most common early cause of death in burn patients. Water intoxication is another complication. Patients can be overloaded with fluids, as well as dehydrated from the lack of fluids. Infection secondary to burns is a major cause of death in later stages. The best way to prevent infection is to wash your hands thoroughly and frequently while giving patient care. Observe for symptoms of Curling's ulcer, an acute peptic ulcer of the upper gastrointestinal tract associated with severe burns.

With staff and patient, develop a plan for pain management. In some cases using less pain medication is possible when alternative techniques to alleviate pain are implemented.

The burn patient suffers a great deal; not only from physical pain, but also from emotional trauma, especially in burns with a great deal of disfigurement. Many patients need additional psychological counseling and an abundance of supportive care.

Scenario

Ron Jefferson is a 38-year-old bookkeeper. He was working late last night when the furnace in his office burst into flames. He ran out of the building with his clothing on fire. Fortunately, a police officer caught him and wrapped him in a blanket to smother the flames. Ron was transported immediately to the hospital, where his family and friends are nearby waiting to find out the extent of his burns.

Ron seems very upset and tells you he is in great pain. The burns on his upper body are more extensive than on his lower body. You are Ron's nurse. What will you do, and how will you care for him?

DIRECTIONS

In this assignment you are given a case study of a hypothetical patient. You can use the scenario or a patient from your clinical experience. Care plans are essentially research projects for each of your patients. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Your instructor will give you a care plan form.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records
- Use content area vocabulary

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/Development
- Master specific job task/procedure

ASSIGNMENT SHEET 1

1. The nurse should consider the following factors:
   - Are there any distractions in the room?
   - Does the patient need glasses?
   - Does the patient feel uncomfortable or need to use the bathroom?
   - Is there sufficient lighting?
   - What is the patient's level of education?
2. - Simple teaching pamphlets
   - Books, pictures, and additional printed information about the disease in case the patient has questions
   - Pencil and paper for the patient to make notes
3. Teaching plan should include the following:
   - Avoid sun exposure, especially between the hours of 10 AM to 3 PM when the ultraviolet rays are strongest.
   - Do not get sunburned.
   - Apply a sunscreen if you are out in the sun. Sunscreen strengths are rated; the solar protection factor is clearly printed on the label. A higher SPF will give greater protection. Sunscreens that contain a concentration of 50-70% alcohol come off easily, so choose one that offers desired protection or reapply often.
   - Avoid sun tanning booths and sun lamps.
   - Wear protective clothing such as long sleeves, slacks, and hats. Certain materials such as nylon do not offer protection because the sun's rays can pass through this material. Cotton is a better choice.
   - Inspect your skin regularly, and seek medical advice if anything looks suspicious.

- If a skin lesion becomes irritated through friction, have it treated.
- Have follow-up appointments for continuing evaluation, and watch for new lesions.
- Caution your children, grandchildren, family and friends, especially those at risk, to avoid sun exposure, and to use skin protection.

ASSIGNMENT SHEET 2

Care plan should meet the following criteria:

- Nursing process followed
  - Assessment
  - Analysis (under direction of RN)
  - Planning
  - Implementation
  - Outcome/evaluation (under direction of RN)
- Problem stated appropriately
- Nursing actions/interventions include discharge planning

JOB SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE INTEGUMENTARY SYSTEM

I

Name ______________________________ Score ________

OBJECTIVE 13

Assess condition of the skin.

INTRODUCTION

Patients with skin problems are often more upset by their situation than patients with other conditions. Skin diseases and disorders arouse feelings of anger, shame, disgust, and withdrawal. Insomnia from anxiety and depression is a consistent problem. Touching patients reduces their sense of isolation. The need for cosmetics to preserve, correct or improve their appearance brings some patients to treatment. Nurses need to understand, support, and encourage their patients.

EQUIPMENT AND SUPPLIES

- Flashlight
- Worksheet
- Pen

PROCEDURE

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Interactive Communications
- Communicate with clients/customers/patients

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Check patient's chart.	_____	_____
2. Reassure patient and explain procedure.	_____	_____
3. Prepare for procedure.	_____	_____
Implementation		
NOTE: Observe universal precautions.		
1. Collect equipment.	_____	_____

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Analyze/synthesize information
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
2. Explain procedure to the patient as steps are performed.	_____	_____
3. Wash your hands.	_____	_____
4. Ask the patient to expose the affected area.	_____	_____
5. Make sure to have adequate lighting available.	_____	_____
6. Use an additional hand-held light to inspect areas that might be difficult to see.	_____	_____
7. Inspect affected area:		
a. Look at the arrangement, distribution, and grouping of lesions or rashes.	_____	_____
b. Note the surface, border, texture, color, and shape of lesions or rashes.	_____	_____
c. Look at the skin color that surrounds the lesions or rashes.	_____	_____
8. Palpate all suspicious areas.	_____	_____
9. Ask the patient if any discomfort is present.	_____	_____
10. Help patient dress, if needed.	_____	_____
11. Clean up: Wash your hands.	_____	_____
12. Document procedure according to agency requirements.	_____	_____
	_____	_____
Evaluation		
1. Check patient in 30 minutes for comfort.	_____	_____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used universal precautions	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
1 **Unskilled** – Is familiar with process, but is unable to perform job

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE INTEGUMENTARY SYSTEM

I

Name ______________________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the integumentary system to their correct definitions. Write the correct letter in the blank.

_____ 1. Tumor cells that are different from their parent tissue

_____ 2. Small, elevated lesion that contains pus

_____ 3. The process of pus formation

_____ 4. Pale, clear, itching wheals

_____ 5. Fibrous tissue changes from injuries

_____ 6. Small, elevated lesion filled with clear fluid

_____ 7. A flat discoloration of various shapes and colors

_____ 8. Transient elevated lesion of edematous tissue

_____ 9. A confined area or limited space

_____ 10. Rounded, solid mass

_____ 11. General term used to describe circumscribed area of injured or diseased tissue

_____ 12. Discolored area formed by plugged oil glands

a. anaplastic
b. angioma
c. capitis
d. circumscribed
e. comedone
f. epidermis
g. epithelial tissue
h. hemangioma
i. lesion
j. macule
k. nodule
l. papule
m. scar
n. suppuration
o. urticaria
p. vesicle
q. wheal

May be photocopied for student use.

OBJECTIVE 2

Choose the correct word or phrase to complete statements about miscellaneous benign diseases and disorders of the integumentary system. Write the correct letter in the blank.

_____ 1. A tumor of the skin and subcutaneous tissue that may be raised or flat is called a birthmark or

a. angioma
b. chloasma
c. hemangioma
d. nevus

_____ 2. A chloasma may be the result of

a. exposure to cold
b. hypertension
c. pregnancy
d. trauma

_____ 3. A common tumor of various sizes, shapes, and colors that may be flat or raised, and sometimes contains hair is called a(n)

a. angioma
b. chloasma
c. hemangioma
d. nevus

_____ 4. A harmless, painless tumor that consists of dilated blood vessels is called a(n)

a. angioma
b. chloasma
c. hemangioma
d. nevus

_____ 5. Angiomas may be removed

a. for cosmetic reasons
b. if they become irritated
c. if they change colors
d. to prevent malignancy

_____ 6. Signs and symptoms of angioma include

a. color ranges from violet-red to bright red
b. itching and/or bleeding
c. tender to the touch
d. yellowish-brown discoloration

May be photocopied for student use

_____ 7. Signs and symptoms of chloasma include

a. color ranges from violet-red to bright red
b. itching and/or bleeding
c. tender to the touch
d. yellowish-brown discoloration

_____ 8. Moles should be observed for any change in appearance because of the risk of

a. infection
b. irritation
c. malignancy
d. ulceration

_____ 9. The teaching plan for patients with angiomas, chloasmas, or nevi should include

a. advise patient to avoid scratching lesions
b. caution against self-treatment
c. instruct patient to wear sunscreen when outside
d. teach patient how and when to use medications

_____ 10 . Ulcerations are usually caused by

a. dermatitis
b. ischemia or infection
c. genetic factors
d. trauma or surgery

_____ 11. Health care management for the patient with ulcerations includes

a. applying cool compresses to ulcerated area
b. giving antibiotics and analgesics
c. massaging around the site of the ulcer
d. using aseptic technique and applying vitamin A

_____ 12. Early symptoms of decubitus ulcers include

a. edema
b. itching
c. painful, tender area
d. warm, reddened area

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_____ 13. When implementing the plan to promote healing for a patient with ulcerations, you should

a. apply vitamin A to broken skin
b. encourage the patient to rest
c. perform range-of-motion exercises
d. avoid moving the patient

OBJECTIVE 3

Choose the correct word or phrase to complete statements about common non-infectious diseases and disorders of the integumentary system. Write the correct letter in the blank.

_____ 1. Which of the following treatments will cure psoriasis?

a. coal tar preparations
b. PUVA therapy
c. topical steroids
d. none of the above

_____ 2. Which of the following psoriasis treatments may cause rebound psoriasis?

a. coal tar preparations
b. PUVA therapy
c. topical steroids
d. none of the above

_____ 3. Which of the following psoriasis treatments may cause cancer in light-skinned persons?

a. coal tar preparations
b. PUVA therapy
c. topical steroids
d. none of the above

_____ 4. Your patient, a custodian, recently began using a new cleaning product. The rash that developed on his hands and arms after he began using this product is probably

a. atopic dermatitis
b. contact dermatitis
c. exfoliative dermatitis
d. seborrheic dermatitis

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_____ 5. Seborrheic dermatitis is a chronic inflammatory disease of

a. hair follicles
b. hairy skin areas
c. hypersensitive skin
d. oily skin areas

_____ 6. Signs and symptoms of psoriasis include

a. circumscribed, painful ulcerations
b. dry, flaky scalp and pink or yellow patches
c. elevated, circumscribed red plaques with silvery scales
d. redness, vesicles, and localized edema

_____ 7. Signs and symptoms of contact dermatitis include

a. circumscribed, painful ulcerations
b. dry, flaky scalp and pink or yellow patches
c. elevated, circumscribed red plaques with silvery scales
d. redness, vesicles, and localized edema

_____ 8. Signs and symptoms of seborrheic dermatitis include

a. circumscribed, painful ulcerations
b. dry, flaky scalp and pink or yellow patches
c. elevated, circumscribed red plaques with silvery scales
d. redness, vesicles, and localized edema

_____ 9. When implementing the plan to promote healing for the patient with psoriasis, you would

a. apply topical medications thickly over plaques
b. provide pre- and postoperative care
c. watch for signs of infection
d. use soaks or warm compresses to remove crusts

_____ 10. The teaching plan for patients with psoriasis should include

a. advising patient to avoid causative factors
b. cautioning patient to avoid shellfish and fried foods
c. discussing infection control techniques
d. teaching patient how to use medications

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_____ 11. Health care management for patients with contact dermatitis includes

a. discuss stress control techniques
b. identify and remove the substance causing the reaction
c. use warm compresses to remove scabs
d. watch for signs of infection

_____ 12. Health care management for patients with seborrheic dermatitis includes

a. instruct patient in proper hygiene
b. keep the patient's fingernails short and clean
c. PUVA therapy
d. shampoo with selenium sulfide

_____ 13. The teaching plan for patients with dermatitis should include

a. caution patient to avoid direct exposure to sunlight
b. discuss stress management techniques
c. patient should bathe daily with antibacterial soap
d. stress the need to avoid scratching lesions

OBJECTIVE 4 **Choose the correct word or phrase to complete statements about common bacterial infectious diseases and disorders of the integumentary system.** Write the correct letter in the blank.

_____ 1. Impetigo is often associated with

a. diabetes mellitus
b. frequent infections
c. poor hygiene and malnutrition
d. stress

_____ 2. A furuncle is defined as a(n)

a. acute localized infection of tissue, skin, gland, or hair follicle
b. acute superficial infection of the skin
c. chronic localized inflammation of the skin and hair follicles
d. contagious skin disease that is common in children

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_____ 3. Carbuncles are abscess areas usually found on the

a. back of the neck and buttocks
b. extremities
c. soles of the feet
d. trunk and abdomen

_____ 4. Health care management for the patient with furuncles includes

a. applying vitamin A
b. assisting with minor surgery
c. encouraging patient to squeeze lesions when they develop a head
d. protecting surrounding skin areas by applying antibacterial ointment

_____ 5. Health care management for the patient with impetigo includes

a. apply coal tar preparations to lesions
b. identify and remove the substance causing the reaction
c. keep the patient's fingernails short and clean to prevent excoriation
d. provide pain relief

_____ 6. When planning for the discharge of a patient with impetigo, include these instructions:

a. apply topical antibiotics to crusts three times daily
b. do not remove crusts
c. everyone in the household should bathe daily with antibacterial soap
d. use cotton swabs and alcohol to remove crusts

_____ 7. Signs and symptoms of furuncles include

a. general malaise and severe itching
b. local swelling, redness, and severe pain
c. vesicles on mouth, nose, eye, or lips
d. vesicles that rupture and form a yellowish crust

_____ 8. Signs and symptoms of impetigo include

a. general malaise and severe itching
b. local swelling, redness, and severe pain
c. vesicles on mouth, nose, eye, or lips
d. vesicles that rupture and form a yellowish crust

May be photocopied for student use.

_____ 9. When implementing the plan to promote healing for a patient with furuncles, you would

a. apply topical antibiotics to crusts three times daily
b. apply warm wet dressings
c. keep lesions dry
d. use cotton swabs and alcohol to remove crusts

_____ 10. The teaching plan for patients with furuncles should include

a. discuss stress management techniques
b. instruct patient to massage lesions to hasten resolution
c. teach patient and family to prevent the spread of infection
d. warn patient against prolonged exposure to sunlight

OBJECTIVE 5

Choose the correct word or phrase to complete statements about common viral infectious diseases and disorders of the integumentary system. Write the correct letter in the blank.

_____ 1. The vesicles caused by herpes simplex type 1 are often called

a. boils
b. cold sores
c. genital herpes
d. herpetic whitlow

_____ 2. Patients with herpes simplex type 2 must be taught to avoid infecting

a. others in the same household
b. pregnant women
c. sexual partners
d. young children

_____ 3. Which of the following can be a symptom of **both** strains of herpes simplex?

a. burning pain in genital area
b. fever blister
c. itching in genital area
d. malaise

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_____ 4. Herpes zoster is caused by the same virus that causes

a. chickenpox
b. herpes simplex
c. meningitis
d. smallpox

_____ 5. Herpes zoster is a painful inflammation of the

a. epidermis
b. derma
c. hair follicles
d. spinal ganglia

_____ 6. Pale, cauliflower-like growths that may cause itching are called

a. anogenital warts
b. herpes simplex
c. pilar warts
d. plantar warts

_____ 7. Pregnant women with Type 2 herpes simplex may require

a. antibiotic therapy
b. cesarean delivery
c. forceps delivery
d. induced delivery

_____ 8. People who are **not** immune to ______________ should **not** care for patients with herpes zoster.

a. chickenpox
b. impetigo
c. herpes simplex
d. smallpox

_____ 9. Signs and symptoms of herpes zoster include

a. edema of surrounding area
b. lesions on backs of hands and soles of feet
c. low-grade fever
d. sharp burning pain

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_____ 10. The teaching plan for patients with herpes zoster should include

a. advise that patients must take care to avoid infecting sexual partners
b. instruct patient to use warm wet compresses to remove crusts
c. stress the need to continue using ointment until lesions are gone
d. warn patient against overexposure to sunlight

_____ 11. The teaching plan for patients with warts should include

a. address patient's knowledge deficit concerning causes of warts and methods of transmission and removal
b. inform patient that cesarean delivery may be indicated for pregnant women with anogenital warts
c. discuss ways to prevent the spread of warts to others
d. stress the need to continue using medication as prescribed, even after warts have disappeared

OBJECTIVE 6

Choose the correct word or phrase to complete statements about common fungal infectious diseases and disorders of the integumentary system. Write the correct letter in the blank.

_____ 1. Because heat and moisture foster fungal infection, keeping the feet clean and dry aids in preventing tinea

a. capitis
b. corporis
c. cruris
d. pedis

_____ 2. Small rings of vesicles containing a clear liquid appear on exposed areas of the body if a patient has tinea

a. capitis
b. corporis
c. pedis
d. unguinum

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_____ 3. Tinea-cruris often affects people who

a. have poor personal hygiene
b. have contact with infected pets
c. do not dry their feet completely after bathing
d. wear tight clothing

_____ 4. If patients must take medication for at least a year, they probably have tinea

a. capitis
b. cruris
c. pedia
d. unguinum

_____ 5. A contagious infection of the scalp characterized by round, reddened, scaling lesions is called tinea

a. capitis
b. cruris
c. pedia
d. unguinum

_____ 6. Assessment for tinea-pedis includes observing the following symptoms:

a. alopecia
b. cracks between toes, scaly rash, vesicles
c. rings of vesicles which appear in clusters
d. round, scaling lesions

OBJECTIVE 7

Choose the best word or phrase to complete statements about common parasitic infestations, insect bites, and stings. Write the correct letter in the blank.

_____ 1. Pediculosis capitis is found on the hair shaft and is often spread by

a. infected pets
b. poor hygiene
c. sexual contact
d. sharing brushes and combs

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_____ 2. Pediculosis pubis is found on the hair shaft and is often spread by

a. infected pets
b. poor hygiene

c. sexual contact
d. sharing brushes and combs

_____ 3. Pediculosis corporis lives chiefly

a. in burrows under the skin
b. in the seams of clothing
c. in wooden furniture
d. on the hair shaft

____ 4. When treating a patient with pediculosis, use ________________ to remove lice from the eyebrows and eyelashes.

a. coal tar preparations
b. fine-toothed comb
c. light applications of topical medications
d. petroleum jelly and tweezers

_____ 5. Scabies is an infestation of

a. bedbugs
b. body lice
c. crabs
d. itch mites

_____ 6. Which of the following are common sites for scabies lesions?

a. axillae, penis, and nipples
b. back of neck and shoulders
c. scalp
d. between fingers and toes and in skin folds

_____ 7. Signs and symptoms of scabies include:

a. dark brown, thread-like lesions
b. clear wheals or pinpoint hemorrhages
c. necrosis at the site of the bite
d. vesicles that ooze and form a crust

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_____ 8. The two major types of dangerous spiders in North America are

a. black widow and brown recluse
b. black widow and tarantula
c. brown recluse and fiddleback
d. fiddleback and tarantula

_____ 9. Avoid all stimulants for a patient who has been bitten by a

a. black widow
b. brown recluse
c. fiddleback
d. tarantula

_____ 10. A friend asks you if she should take her child to the emergency room to treat a bee sting. You answer that she should get emergency help if she sees any signs of

a. local reaction
b. redness at the site of the sting
c. pain at the site of the sting
d. wheezing or dyspnea

_____ 11. Assessment of patients with scabies may require which of the following diagnostic procedures?

a. allergy test
b. biopsy
c. culture
d. skin scraping

_____ 12. Assessment of patients with spider bites includes observing the following symptoms:

a. chills and fever
b. dyspnea and edema
c. redness and itching
d. paralysis of affected limb

_____ 13. The teaching plan for patients with pediculosis should include

a. discuss preventive methods
b. discuss desensitization therapy
c. instruct patient to thoroughly air out clothing, towels, and bedclothes
d. teach patient proper hygiene methods

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_____ 14. The teaching plan for patients with scabies should include

a. advise patient with allergy to wear medical alert bracelet and carry anaphylaxis kit at all times
b. discuss avoidance techniques
c. discuss desensitization therapy
d. instruct patient that all clothing, towels, and bedclothes must be washed in hot water, dry cleaned, or stored in sealed plastic bags

_____ 15. Health care management for a patient who has been bitten by a spider includes

a. apply cold compress to bite area
b. apply pressure to bite area
c. apply tourniquet to affected arm
d. gently massage site of bite

_____ 16. When implementing the plan to promote healing for the patient who has been bitten by a spider, you should

a. apply warm moist compress to painful area
b. provide pre- and postoperative care
c. provide symptomatic relief for pain and itching
d. use rotating tourniquets

_____ 17. The teaching plan for patients with insect stings should include

a. advise patient to use perfumed soaps or lotions to repel insects
b. emphasize the need for hypersensitive patients to wear a medical warning bracelet
c. instruct patient to use warm compresses to help drain poison
d. teach patient to apply medications

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OBJECTIVE 8 **Choose the correct word or phrase to complete statements about neoplasms of the integumentary system.** Write the correct letter in the blank.

_____ 1. Risk factors for basal cell carcinoma include

a. dark complexion
b. exposure to sunlight, radiation, or certain chemicals
c. irritants such as poorly fitting dentures or cheek biting
d. smoking

_____ 2. Growth rate is very rapid and the cancer may metastasize to other areas if a patient has

a. actinic keratosis
b. basal cell carcinoma
c. squamous cell carcinoma
d. malignant melanoma

_____ 3. Your patient has a small, shiny nodule on her arm. The nodule has a pale border and an ulcerated area in the center. She may have

a. actinic keratosis
b. basal cell carcinoma
c. squamous cell carcinoma
d. malignant melanoma

_____ 4. Your patient has a dark brown mole on his neck that recently became larger, lost its hair, and began to itch. He may have

a. actinic keratosis
b. basal cell carcinoma
c. squamous cell carcinoma
d. malignant melanoma

_____ 5. Chemical changes in the skin of persons who are exposed to sunlight, x-rays, or ultraviolet light result in

a. actinic keratosis
b. basal cell carcinoma
c. malignant melanoma
d. seborrheic keratosis

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______ 6. Large lesions that feel velvety or greasy are seen in patients with

a. actinic keratosis
b. basal cell carcinoma
c. malignant melanoma
d. seborrheic keratosis

______ 7. Health care management for patients with basal cell carcinoma includes

a. chemotherapy
b. immunotherapy
c. curettage
d. radiation therapy

______ 8. The care plan for patients with carcinomas or melanomas includes

a. antibiotic therapy
b. applying topical medications
c. observing for recurring neoplasms
d. silver nitrate therapy

______ 9. A rough, thick, scaly nodule with a hardened or inflamed base is a symptom of

a. actinic keratosis
b. malignant melanoma
c. seborrheic keratosis
d. squamous cell carcinoma

______ 10. When planning for the discharge of a patient with carcinoma or melanoma, you should instruct the patient to

a. apply topical medications to lesions
b. keep all moles and birthmarks clean and dry
c. watch for signs of infection
d. watch for any new mole or change in an existing mole

______ 11. Signs and symptoms of actinic keratosis include

a. crusting and dilation of end blood vessels
b. large lesions that feel greasy or velvety
c. round or irregular, dry, scaly lesions
d. white area within a pigmented lesion

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_____ 12. The most common kind of skin tumor in middle-age and older persons is

a. actinic keratosis
b. basal cell carcinoma
c. seborrheic keratosis
d. squamous cell carcinoma

_____ 13. The teaching plan for patients with keratoses should include

a. discuss symptoms that should be reported to physician
b. instruct patient to use warm moist compresses on lesions
c. stress the need to remove seborrheic lesions to prevent malignancy
d. teach patient to use medications

OBJECTIVE 9

Choose the correct word or phrase to complete statements about burns. Write the correct letter in the blank.

_____ 1. Redness, pain, and edema are noted with

a. first-degree burns
b. second-degree burns
c. third-degree burns
d. fourth-degree burns

_____ 2. Second degree burns usually

a. cause redness and tenderness, but no blistering
b. damage fascia, tendons, muscle, and bone
c. heal with little or no scarring
d. involve underlying tissue

_____ 3. If the epidermis, dermis, fascia, muscle, and bone are damaged, patients usually have

a. first-degree burns
b. second-degree burns
c. third-degree burns
d. fourth-degree burns

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_____ 4. If the patient's hair can be easily pulled out, but the muscles and bones are not damaged, the patient probably has a

a. first-degree burn
b. second-degree burn
c. third-degree burn
d. fourth-degree burn

_____ 5. When checking a burn patient's records, always check their immunization history for evidence of a ____________________ vaccination.

a. measles
b. mumps
c. tetanus
d. tuberculosis

_____ 6. Health care management for patients with first-degree burns includes

a. debridement of necrotic tissue
b. escharotomy
c. immersion in cold water
d. skin grafts

_____ 7. Assessment of patients with third-degree burns includes observing the following symptoms:

a. burned area blanches with fingertip pressure
b. charred blood vessels are visible
c. hair cannot be easily pulled from burned area
d. severe pain

_____ 8. When monitoring the condition of a burn patient, you will observe for complications such as

a. anaphylaxis
b. Curling's ulcer
c. pneumonia
d. trench mouth

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_____ 9. The teaching plan for patients with burns should include

a. advise patient to restrict fluid intake
b. instruct patient to use warm compresses on burned areas
c. stress the need to use aseptic technique
d. teach proper use of burn garments

_____ 10. Health care management for the patient with third-degree burns includes

a. diuretics and restricted fluid intake
b. keep patient's fingernails short to prevent excoriation
c. prevention of mobility limitations
d. watch for signs of enteric infection

OBJECTIVE 10

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the integumentary system. Write the correct letter in the blank.

_____ 1. Health care management for patients with atopic eczema includes

a. bed rest
b. coal tar therapy
c. tests to determine if the patient's immune system is suppressed
d. tests to determine which substances cause an allergic reaction

_____ 2. Signs and symptoms of atopic eczema include

a. dry, scaly lesions
b. painful abscessed areas
c. red lesions that ooze and crust
d. tender inflamed areas

_____ 3. A patient with chickenpox is contagious until

a. every lesion has disappeared
b. every lesion has dried and formed a crust
c. no fever is present
d. three days after all lesions have crusted

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_____ 4. Medications used for candidal diaper dermatitis include

a. corticosteroids
b. antifungal agents
c. analgesics
d. tretinoin acid

_____ 5. Symptoms of oral candidiasis include:

a. edema and itching around affected area
b. red scaly rash on diaper area
c. vesicles on lips and mucous membranes
d. white plaques on oral mucous membranes, gums, and tongue

_____ 6. Atopic eczema is defined as a(n)

a. common communicable viral infection
b. fungal infection in newborns and infants
c. inflammatory condition in genetically hypersensitive skin
d. infection that often occurs in infants who are sick and/or on antibiotic therapy

_____ 7. Symptomatic relief for patients with atopic eczema includes

a. keep diaper area clean and dry
b. powders and ointments
c. warm compresses
d. wet soaks

_____ 8. Signs and symptoms of chickenpox include

a. itching rash of vesicles on head, mucous membranes, and trunk
b. moist patches with pustules
c. red, weeping lesions
d. white plaques on oral mucous membranes, gums, and tongue

_____ 9. Prevention techniques for pediatric fungal infections include

a. coat diaper area with cream or oil
b. keep diaper area powdered
c. practice good handwashing techniques
d. use of double diapers

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_____ 10. Pediatric fungal infections are common in

a. children between the ages of 2 months and 2 years
b. children with a family history of allergies
c. infants who are sick and/or on antibiotic therapy
d. school-age children and children in day care

NOTE: Objectives 11-13 are evaluated on Job Sheet/Assignment Sheets in this unit. If you have not completed these components, see your instructor.

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WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE INTEGUMENTARY SYSTEM

I

OBJECTIVE 1

1.	a	7.	j
2.	l	8.	q
3.	n	9.	d
4.	o	10.	k
5.	m	11.	i
6.	p	12.	e

OBJECTIVE 2

1.	a	6.	a	11.	c
2.	c	7.	d	12.	d
3.	d	8.	c	13.	c
4.	c	9.	b		
5.	a	10.	b		

OBJECTIVE 3

1.	d	6.	c	11.	b
2.	c	7.	d	12.	d
3.	b	8.	b	13.	d
4.	b	9.	a		
5.	d	10.	d		

OBJECTIVE 4

1.	c	6.	c
2.	a	7.	b
3.	a	8.	d
4.	d	9.	b
5.	c	10.	c

OBJECTIVE 5

1.	b	6.	a	11.	a
2.	c	7.	b		
3.	d	8.	a		
4.	a	9.	d		
5.	d	10.	c		

OBJECTIVE 6

1.	d	4.	d
2.	b	5.	a
3.	d	6.	b

OBJECTIVE 7

1.	d	7.	a	13.	a
2.	c	8.	a	14.	d
3.	b	9.	a	15.	a
4.	d	10.	d	16.	c
5.	d	11.	d	17.	b
6.	a	12.	c		

OBJECTIVE 8

1.	b	6.	d	11.	c
2.	c	7.	c	12.	c
3.	b	8.	c	13.	a
4.	d	9.	d		
5.	a	10.	d		

OBJECTIVE 9

1.	a	6.	c
2.	c	7.	b
3.	d	8.	b
4.	c	9.	d
5.	c	10.	c

OBJECTIVE 10

1.	d	6.	c
2.	c	7.	d
3.	b	8.	a
4.	b	9.	c
5.	d	10.	c

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE MUSCULOSKELETAL SYSTEM II

INTRODUCTION

Problems associated with the musculoskeletal system affect all age groups. They are usually not life-threatening, but do affect us in terms of economics and functioning. The musculoskeletal system includes bones, connective tissue, and muscles. This structure comprises 75% of body weight. The musculoskeletal system is interdependent with other body systems and is designed to provide support, protection, and locomotion.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the musculoskeletal system and associated nursing processes. In addition, you will demonstrate these competencies by completing Assignment Sheets, Job Sheets, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the musculoskeletal system to their correct definitions.
2. Choose the correct word or phrase to complete statements about soft tissue disorders.
3. Choose the correct word or phrase to complete statements about bone fractures.
4. Choose the correct word or phrase to complete statements about joint disorders.
5. Choose the correct word or phrase to complete statements about degenerative disorders of the skeletal system.
6. Choose the correct word or phrase to complete statements about connective tissue disorders.
7. Choose the correct word or phrase to complete statements about neoplastic disorders.

8. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the musculoskeletal system.

9. Plan care for patients with diseases and disorders of the musculoskeletal system. (Assignment Sheet 1)

10. Plan pre- and postoperative care for a patient undergoing above-the-knee amputation. (Assignment Sheet 2)

11. Care for a patient with a cast. (Job Sheet 1)

12. Care for a patient in traction. (Job Sheet 2)

13. Wrap the stump of an amputee. (Job Sheet 3)

14. Place abductor pillows. (Job Sheet 4)

PREPARATION

- Review unit and plan presentation.

- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.

- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 – Objective 1, basic information that supports the rest of the unit;

  Part 2 – Objectives 2 and 3, the first two groupings of diseases and disorders of the musculoskeletal system, including soft tissue disorders and fractures;

  Part 3 – Objectives 4 and 5, the next two groupings, including joint disorders and degenerative disorders; and

  Part 4 – Objectives 6-8, the next three groupings, including connective tissue disorders, neoplastic disorders, and pediatric disorders.

- Review teaching suggestions and plan classroom activities.

- Determine how you will schedule time for students to demonstrate competence in the required procedures.

- Order materials to supplement unit.

- Invite a guest speaker to discuss diseases and disorders of the musculoskeletal system.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet, and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.

- Obtain models and large pictures of the musculoskeletal system.

- Make a poster of the musculoskeletal system.
- Make a bulletin board showing the musculoskeletal system.
- Devise games and/or crossword puzzles to reinforce terms or groupings.
- Make transparencies.
- **HOSA** Integration
  - Assist students to conduct a chapter service project on diseases and disorders of the musculoskeletal system.
  - Develop objectives for service project and identify a theme.
  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.
  - Plan a community or school health project that involves disseminating pamphlets about diseases and disorders and proper care of the musculoskeletal system.
  - Develop and/or participate in a community teaching project that involves diseases and disorders of the musculoskeletal system.
- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.
- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the musculoskeletal system to their correct definitions.

- Discuss terms associated with the musculoskeletal system.
- Have students play reinforcement games and work crossword puzzles using terms.
- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about soft tissue disorders.

- Have students share relevant incidents about friends or family members who have problems related to soft tissue disorders.
- Have students share ideas that might be helpful in evaluating soft tissue disorders.
- Review the structures of the body associated with soft tissue disorders.

Objective 3: Choose the correct word or phrase to complete statements about bone fractures.

- Have students share relevant incidents about friends or family members who have problems related to bone fractures.
- Have students share ideas that might be helpful in evaluating bone fractures.
- Discuss ways in which nurses could improve the care of patients with bone fractures.
- Review the anatomy of the musculoskeletal system.
- Have students complete Assignment Sheet 1.

Objective 4: Choose the correct word or phrase to complete statements about joint disorders.

- Have students share relevant incidents about friends or family members who have problems related to joint disorders.
- Have students share ideas that might be helpful in evaluating joint disorders.

Objective 5: Choose the correct word or phrase to complete statements about degenerative disorders of the skeletal system.

- Have students share relevant incidents about friends or family members who have problems related to degenerative disorders of the skeletal system.

- Have students share ideas that might be helpful in evaluating degenerative disorders of the skeletal system.

- Discuss ways in which nurses could improve the care of patients with skeletal system degeneration.

Objective 6: Choose the correct word or phrase to complete statements about connective tissue disorders.

- Have students share relevant incidents about friends or family members who have problems related to connective tissue disorders.

- Have students share ideas that might be helpful in evaluating connective tissue disorders.

- Discuss ways in which nurses could improve the care of patients with connective tissue disorders.

Objective 7: Choose the correct word or phrase to complete statements about neoplastic disorders.

- Have students share relevant incidents about friends or family members who have problems related to neoplastic disorders.

- Have students share ideas that might be helpful in evaluating neoplastic disorders.

- Discuss ways in which nurses could improve the care of patients with neoplastic disorders.

Objective 8: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the musculoskeletal system.

- Have students share relevant incidents about friends or family members who have problems related to pediatric diseases and disorders of the musculoskeletal system.

- Have students share ideas that might be helpful in evaluating pediatric diseases and disorders.

- Discuss ways in which nurses could improve the care of patients with pediatric disorders and diseases of the musculoskeletal system.

APPLICATION

- Make a video or skit about care of a person with problems associated with diseases and disorders of the musculoskeletal system. The students can do the presentation, or the teachers can entertain the students.

- Students can practice care of the patient with problems associated with this unit.

- Have students present a one-minute speech on care of a patient with problems associated with the musculoskeletal system.

Objective 9: Plan care for patients with diseases and disorders of the musculoskeletal system. (Assignment Sheet 1)

- Use Assignment Sheet 1 to give the students an opportunity to practice ideas that will help when they care for a patient with disorders and diseases of the musculoskeletal system.

- Provide a care plan form for students' use.

Objective 10: Plan pre- and postoperative care for a patient undergoing above-the-knee amputation. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give the students an opportunity to practice ideas that will help when they care for a patient with disorders and diseases of the musculoskeletal system.

- Provide a care plan form for students' use.

Objective 11: Care for a patient with a cast. (Job Sheet 1)

- Use Job Sheet 1 to give students hands-on experience in caring for a patient with a cast.

- Use a mannequin to practice and demonstrate procedures in the classroom.

- Use a real situation or the following scenario:

Frances Harrington is a 34-year-old carpenter who fell from a ladder and was brought to the emergency room on a stretcher. She was x-rayed and sent to surgery for an open reduction. After being in the recovery room for several hours, she was admitted to the orthopedic unit with a cast. She is in traction, and her pain is severe.

Objective 12: Care for a patient in traction. (Job Sheet 2)

- Use Job Sheet 2 to give students hands-on experience in caring for a patient in traction.
- Use a mannequin to practice and demonstrate procedures in the classroom.
- Use an actual case or the scenario given for Objective 11.

Objective 13: Wrap the stump of an amputee. (Job Sheet 3)

- Use Job Sheet 3 to give students hands-on experience in wrapping the stump of an amputee.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 14: Place abductor pillows. (Job Sheet 4)

- Use Job Sheet 4 to give students hands-on experience in placing abductor pillows.
- Use a mannequin to practice and demonstrate procedures in the classroom.

EVALUATION

Pretest

- Give Written Test as pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.
- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.

- Complete appropriate sections of Competency Profiles.

- Reteach and retest if necessary.

- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.

- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.

- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.

- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *American Institute for Cancer Research Newsletter,* 1759 R. Street, N.W., Washington, DC 20009.

- *University of California Berkeley Wellness Letter,* 48 Shattuck Square, Suite 43, Berkeley, CA 94704-1140.

UNIT REFERENCES

- Betz, Cecily Lynn and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.

- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St. Louis: Mosby-Year Book, Inc., 1991.

- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.

- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.

- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.

- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.

- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.

- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C.V. Mosby Company, 1990.

OBJECTIVE 1

Match terms associated with diseases and disorders of the musculoskeletal system to their correct definitions.

- **cast** — Solid mold made of fiberglass, plaster of paris, or other synthetic material that is applied directly to an affected limb and provides immobility for the injured part
- **closed reduction** — Manipulation by a doctor that results in bringing broken bone ends together
- **contracture** — Abnormal shortening of muscle resulting in restricted movement of a body part
- **crepitus** — Cracking, grating sensation or sound
- **ecchymosis** — An asymmetric hemorrhage area of the skin; a bruise
- **fracture** — Break in a bone; generally caused by a blow (direct or indirect) that is greater than the bone can absorb, a crushing force, a sudden twist, or a muscle contraction.
- **hematoma** — Mass resulting from coagulation of blood in a tissue or cavity
- **neuropathy** — Any nerve disease
- **open reduction** — Surgical procedure that involves cleaning the area and attaching the bone ends

OBJECTIVE 2

Choose the correct word or phrase to complete statements about soft tissue disorders.

Description and etiology

Contusion — Injury to soft tissues. Small vessels rupture and cause swelling in the affected area, resulting in ecchymosis and possibly a hematoma. The skin is not broken.

Causes

- Usually caused by blunt force

Health care management

- Pain relief
- Apply ice pack and elevate affected area
- Contusions can be serious (for example, contusion of the brain), especially when large areas are affected and blood is absorbed slowly

ASSESSMENT

Signs and symptoms

Contusion

- Pain
- Swelling
- Discoloration

Description and etiology

Dislocation — Displacement of a bone from its normal position in a joint due to ligaments giving away completely. A ligament normally holds bones together and allows the joint to move, while maintaining stability.

Causes

- Congenital defects
- Spontaneous structures (wrenching, twisting, overuse, and overstretching)
- Trauma

Health care management

- Treatment includes an x-ray to assess the injury, then reduction with the application of a supportive device to immobilize the joint while healing takes place
- Pain relief
- There may be vascular or nerve injury – neurovascular assessment is important

ASSESSMENT

Signs and symptoms

Dislocation

- May or may not be visible
- Affected extremity may appear longer or shorter

	• Pain • Loss of function
Description and etiology	**Sprain** — Trauma to a muscle, joint, or ligament caused by twisting or wrenching. Ruptured blood vessels cause swelling in the affected area from accumulated blood. The ankle is the most commonly sprained joint.
Causes	• Wrenched or twisted joint
Health care management	• Treat as a fracture until proven otherwise – an X-ray is the only accurate way to determine if there is bone injury • Pain relief • Apply ice pack and elevate affected area • Immobilization
ASSESSMENT	**Signs and symptoms**
Sprain	• Pain and tenderness • Rapid swelling • Limited joint function • Discoloration
Description and etiology	**Strain** — A muscle tear or injury caused by overuse. The injury is accompanied by bleeding and swelling. This type of tissue injury is sometimes referred to as a "pulled muscle."
Causes	• Overuse or excessive stress • Overstretching
Health care management	• Same as sprains

ASSESSMENT	**Signs and symptoms**
Strain	• Stiffness • Ecchymosis and edema over affected area • Pain and tenderness which may not appear for several hours after injury
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

SOFT TISSUE DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions • Protect against falls
• Check medication record	
• Collect equipment	
• Promote healing	• Immobilize affected part • Apply cold • Apply elastic bandage to reduce swelling and promote healing • Elevate affected part to reduce edema • Control pain • Provide comfort
• Continually monitor patient's condition	• Observe for onset or change in symptoms: – Ecchymosis – Swelling – Hematoma – Change in extremity contour • Monitor circulation, motion, and sensation
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes.

- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about bone fractures.

NOTE: Treatment for fractures depends on the severity of the condition. Patients should be x-rayed to assess the extent and type of injury.

Description and etiology

- General types of fractures:
  - **Complete** – a break that involves the entire cross section of bone. Bone is frequently displaced from the normal position.
  - **Incomplete** – the break occurs through part of the bone and bone is not displaced.
  - **Open** — break results in a piece of bone that protrudes through the skin causing an open wound; sometimes referred to as a *compound* fracture. Because there is an open wound, the danger of infection exists.
  - **Closed** — break that does not protrude through the skin; sometimes referred to as a *simple* fracture.
- Specific types of fractures:
  - **Spiral** — Break twists around the shaft of the bone; caused by a twisting force.
  - **Transverse** — Break occurs at a right angle to the axis of the bone
  - **Greenstick** — Bone bends and splits, but does not completely break. This break is most common in children because their bones are very soft and pliable.
  - **Comminuted** — Break splinters or crushes the bone.
  - **Impacted** – A complete fracture with one broken end forcibly wedged into the other end.

- **Pathologic** — Weakened bone breaks without force or injury, or with force that would not have fractured a healthy bone.
- **Compression** — The bone collapses inward on itself. This type of fracture is often seen in the vertebrae.
- **Oblique** — Break slants across the bone.

Causes

- Direct or indirect trauma
- Muscular contraction
- Diseased or weakened bones (osteomyelitis, osteoporosis, syphilis, etc.)

Health care management

- Pain control
- Splints and immobilizers
- Reduction (manual manipulation or surgical intervention)
- Infection control
- Observe for signs of gangrene, tetanus, osteomyelitis
- Surgeries: open and closed reductions, external fixation, internal fixation, debridement, spinal fusion, insertion of stabilizing rods in spine or hip, joint replacement, amputation
- Medications: narcotic and non-narcotic analgesics, sedatives, tetanus toxoid (open fracture), antibiotics
- Possible complications: pulmonary embolism, skin irritation, infection

ASSESSMENT

Bone fracture

Signs and symptoms

- Pain
- Loss of normal function
- Deformity (in an impacted fracture, the extremity may appear shorter)
- Edema, warmth, ecchymosis over injured area
- Loss of sensation or paralysis
- Unnatural movement

- Crepitus

NOTE: Do not attempt to obtain unnatural movement or crepitus – this will cause further pain and injury.

- Fragments of bone protrude from open wound (open fracture)

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

FRACTURES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions • Prevent falls
• Check medication record	• Open fracture: check immunization record for tetanus toxoid
• Collect equipment	
• Promote healing	• Provide pain relief • Assist with reduction if needed • Elevate extremity to reduce swelling • Patient in traction – Administer high protein and vitamin diet – Encourage fluids – Maintain proper body alignment – Record I/O – Inspect for proper placement of pulleys, ropes, weights, and knots – If IM medication necessary, administer to unaffected side
• Continually monitor patient's condition	• Observe for – Signs of infection (foul odor from cast) – Wound drainage (stains on cast) – Impaired skin integrity and skin irritation – Circulation, motion, sensation in affected limb – Complications of pulmonary embolism
• Plan for patient's discharge	• Prepare teaching plan • Discuss cast care • Warn patients about the risks of abrasion and infection from sticking sharp objects under the cast

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
OBJECTIVE 4	**Choose the correct word or phrase to complete statements about joint disorders.**
Description and etiology	**Ganglion cyst** — Cystic tumor in a tendon sheath. These tumors are usually painless and often develop on the back of the wrist.
Causes	• Contusions or strains that gradually weaken the sheath surrounding the nerves
Health care management	• Requires no treatment, may subside spontaneously • May be surgically removed for cosmetic reasons
ASSESSMENT	**Signs and symptoms**
Ganglion cyst	• Round, firm nodule • Usually seen on back of wrist

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Description and etiology	**Carpal tunnel syndrome** — Neuropathy from pressure on the median nerve, the nerve that goes through the carpal tunnel of the wrist. One or both hands may be affected.
Causes	• Repetitive motions of the fingers (for example, typing)
Health care management	• Rest and splinting of the affected wrist • Local injection of steroids • Elevate hand • Surgeries: section of the transverse carpal ligament

ASSESSMENT — **Signs and symptoms**

Carpal tunnel syndrome

- Burning pain or tingling in hands, often occurring at night
- Numbness of thumb and fingers
- Difficulty grasping or holding small objects

ANALYSIS — Report findings to RN who will assimilate information for analysis and nursing care.

CARPAL TUNNEL SYNDROME and GANGLION CYST

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medication as prescribed • Use splint to immobilize affected area
• Continually monitor patient's condition	
• Plan for patient's discharge	• Prepare teaching plan • Discuss preventive measures – Exercises – Periodic rests when performing repetitive activities

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

BEST COPY AVAILABLE

Description and etiology	**Tendonitis** — Inflammation of a tendon. "Tennis elbow," which causes pain along the forearm, is a common form of tendonitis.
Causes	• Strain and overuse
Health care management	• Rest and immobilization of the affected part • Applications of heat or cold as prescribed • Medications: nonsteroidal anti-inflammatory agents, cortisone injection
ASSESSMENT	**Signs and symptoms**
Tendonitis	• Pain in a tendon, aggravated by motion • Weakness of an extremity • Difficulty grasping objects
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

TENDONITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications as prescribed • Apply heat or cold to affected area • Use splint or straps to immobilize area
• Continually monitor patient's condition	
• Plan for patient's discharge	• Prepare teaching plan • Discuss preventive measures • Emphasize the need for immobilization

NOTE: This is not a care plan, but a nursing process guide.

BEST COPY AVAILABLE

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about degenerative disorders of the skeletal system.

Description and etiology

Osteoporosis — Degeneration of the bone. Mineral and calcium content in bone is reduced, resulting in a loss of bone mass. The bones become porous, brittle, and fragile. This disorder is most common in women who have reached menopause. The cause is unknown, but genetic and environmental factors may be involved.

Risk factors

- Post-menopausal female
- Small bone structure
- Sedentary lifestyle or immobilization
- Use of steroids
- High caffeine intake

Health care management

- Injury prevention
- Preventing further bone loss
- Medications: analgesics, estrogen, dietary supplements of calcium and vitamin D

ASSESSMENT

Signs and symptoms

Osteoporosis

- Backache
- "Dowager's hump" (spinal deformity and loss of height caused by vertebral fractures)
- Pain in the lumbar and low thoracic regions that is aggravated by sitting, standing, straining, coughing, or sneezing

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

OSTEOPOROSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Prevent injury • Administer medications • Provide high calcium and protein diet and/or dietary supplements • Encourage ambulation and rest as ordered
• Continually monitor patient's condition	• Observe for onset or changes in symptoms • Watch for signs of fractures, which can occur without the patient's knowledge
• Plan for patient's discharge	• Prepare teaching plan – Encourage diet rich in calcium, vitamin D, and protein, with reductions in caffeine, alcohol, and smoking – Encourage regular exercise and the use of a firm mattress – Emphasize safety and accident prevention

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Osteomyelitis** — Bone inflammation caused by an invasion of an infectious organism such as bacteria. This type of infection can be localized or systemic, and is difficult to cure. Compound or open fractures lend themselves to this type of complication.
Causes	• Infection
Health care management	• Accident prevention • Medications: broad-spectrum antibiotics, analgesics

ASSESSMENT	**Signs and symptoms**
Osteomyelitis	• Pain and tenderness in affected part • Fever • Edema • Inflammation
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

OSTEOMYELITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Check for allergies to antibiotics
• Collect equipment	
• Promote healing	• Use surgical asepsis when treating wounds or changing dressings • Administer medications as prescribed • Provide diet high in calories, vitamins, and protein • Keep affected part immobilized • Encourage ambulation and/or rest as ordered
• Continually monitor patient's condition	• Observe for signs of infection
• Plan for patient's discharge	• Prepare teaching plan – Bones affected by osteomyelitis are subject to pathological fractures; emphasize safety and accident prevention – Disease may become chronic

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

OBJECTIVE 6 **Choose the correct word or phrase to complete statements about connective tissue disorders.**

Description and etiology

Lyme arthritis — Lyme arthritis is secondary to Lyme disease, an inflammatory disorder characterized by skin lesions, chronic polyarthritis, and involvement of the heart and CNS.

Causes

- *Borrelia burgdorferi* spirochete (transmitted by ticks, especially the deer tick)

Health care management

- Medications: salicylates, nonsteroidal anti-inflammatory agents

ASSESSMENT

Signs and symptoms

Lyme arthritis

- Early signs usually occur in the summer
  - Red macule or papule that expands into a large round lesion
  - Malaise, fatigue
  - Fever
  - Headache and stiff neck
- Chronic polyarthritis (without joint swelling) develops days to years later

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Description and etiology

Syphilitic arthritis — Syphilis is a sexually transmitted disease that causes systemic damage if left untreated. Arthritis is a complication of syphilis that may occur in the secondary and tertiary stages of the disease.

Causes

- *Treponema pallidum* spirochete (usually transmitted by sexual contact, may also be passed from mother to fetus)

Health care management

- Medications: antibiotics

ASSESSMENT

Signs and symptoms

Syphilitic arthritis

- Tender, swollen joints
- Limited mobility

Description and etiology	**Tuberculous arthritis** – Tubercular infection of a joint. If untreated, tuberculosis may invade the joints, causing inflammation and fluid accumulation.
Causes	• *Mycobacterium* bacilli
Health care management	• Patient should be kept in respiratory isolation • Drugs used in combination are more effective • Medications: antibacterials, antibiotics, antituberculosis drugs
ASSESSMENT	**Signs and symptoms**
Tuberculous arthritis	• Edema, inflammation, and pain in joints
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

LYME, SYPHILITIC, and TUBERCULOUS ARTHRITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Prevent spread of disease • Give supportive care • Encourage physical activity as tolerated • Encourage increased fluid intake • Encourage bed rest when needed
• Continually monitor patient's condition	• Observe for onset or change in symptoms
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Rheumatoid arthritis (RA) — Chronic systemic inflammation of the joints. RA causes deformities by destroying cartilage and forming tough tissue that prevents movement. Joints that are primarily involved are wrists, elbows, knees, and ankles. Arthritis in more than one joint is called *polyarthritis*. There is no cure for RA at this time.

Causes

- Unknown (theories include viruses, microorganisms, and genetic predisposition)

Health care management

- Pain relief
- Maintaining and/or increasing mobility
- Adequate rest, exercise, and nutrition
- Rehabilitation and adaptation to carry out ADLs
- Transcutaneous electrical nerve stimulation (TENS)
- Hot and/or cold applications to relieve stiffness and reduce swelling
- Surgeries: osteotomy, synovectomy, total joint replacement
- Medications: salicylates, nonsteroidal anti-inflammatory agents, corticosteroids, gold salts
- Assistive devices for activities of daily living
  - An arthritic cock-up splint is a working splint that can be used to allow patients to write and move their hands even though they have painful joints.
  - Rest splints are applied to the hand, and are important when the hand is acutely inflamed.
  - Plate guards are attached to the plate, and are used to assist with getting the food off of the plate.

- — Long-handled utensils aid patients who have a limited range of motion.
- — Universal cuffs and utensils with built-up handles assist the patient who has lost the ability to grasp utensils.
- — Crutches, walkers, and canes come in various sizes and should be fitted by an expert to minimize complications and to allow the patient to regain full use of the body parts.
- — Other miscellaneous devices include shoehooks, zipper pulls, and built-up toilet seats.

ASSESSMENT

Rheumatoid arthritis

Signs and symptoms

- Muscle weakness
- Morning stiffness
- Generalized aching
- Edema and tenderness of joints
- Elevated sedimentation rate
- Anemia
- Fatigue

Description and etiology

Juvenile rheumatoid arthritis — An inflammatory joint disease that affects children, usually before age 16. Involvement may include only a few small joints or many larger joints; or it may be systemic, involving other body systems. Many patients experience a complete remission.

Causes

- Unknown (may be caused by infection or autoimmune process)

Health care management

- Same as rheumatoid arthritis

ASSESSMENT

Signs and symptoms

- Same as rheumatoid arthritis

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

RHEUMATOID ARTHRITIS (RA) and JUVENILE RHEUMATOID ARTHRITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications (adjust dosage for child's weight) • Prevent joint damage and contractures – Use passive and active ROMs – Do not place pillows under affected joints; this can cause contractures • Help patient adapt to limitations and perform ADLs • Use cold applications on inflamed joints • Apply heat to reduce muscle spasms and stiffness • Encourage increased fluid intake • Encourage physical activity as tolerated • Encourage rest when needed
• Continually monitor patient's condition	
• Plan for patient's discharge	• Prepare teaching plan – Maintain a safe environment – Emphasize adequate rest, exercise, and nutrition – Warn against changing medication or using "miracle cures" without discussing with physician – Demonstrate adaptive devices to help with ADLs

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Degenerative joint disease (osteoarthritis) — Degenerative disease of the joints. Affects primarily weight-bearing joints, leading to disintegration of the cartilage covering the ends of bones. There are two types of DJD: primary and secondary.

Causes

- Primary: unknown (genetic factors may be involved)
- Secondary:
  - — Trauma
  - — Infections
  - — Excessive "wear and tear" from obesity or certain occupations
  - — Previous fractures

Health care management

- Pain relief
- Maintaining and/or increasing mobility
- Surgeries: tendon repair, debridement of loose cartilage and bone spurs, osteotomy, arthrodesis, joint replacement
- Medications: salicylates, nonsteroid anti-inflammatory agents, steroids, adjunctive analgesics

ASSESSMENT

Degenerative joint disease

Signs and symptoms

- Pain and swelling in joints, especially after activity
- Mild tenderness
- Crepitus
- Stiffness after rest
- Limitation of joint motion

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

DEGENERATIVE JOINT DISEASE

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions Prevent falls
Check medication record	
Collect equipment	
Promote healing	Administer medications Teach correct posture and body mechanics Use heat to relieve pain and stiffness Use splints and braces to immobilize affected joints Use active and passive ROMs Encourage physical activity as tolerated Encourage rest when needed Encourage increased fluid intake
Continually monitor patient's condition	Observe for onset or change in symptoms
Plan for patient's discharge	Prepare teaching plan (see rheumatoid arthritis)

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Gout — Inflammation of a joint caused by a buildup of uric acid crystals. A disorder of purine metabolism causes an accumulation of uric acid in the bloodstream, which crystallizes and deposits in the joints. Middle-aged men are most often affected. The great toe is most commonly affected; the instep, ankle, or knee may also be involved.

Causes

- Excess uric acid in the bloodstream
- Genetic tendency
- Use of certain drugs (such as diuretics)

Health care management

- Pain relief
- Alter diet to avoid foods with high purine content (organ meats, yeast, herring, mackerel, anchovies, scallops)
- Gout patients are at an increased risk of developing kidney stones; a fluid intake of at least 2000 ml per day helps to eliminate excessive urates in the urine
- Medications: antiarthritics, anti-inflammatory drugs, oxidase inhibitors

ASSESSMENT

Signs and symptoms

Gout

- Pain, generally occurring at night
- Edema, heat, and discoloration of joints (especially the great toe)
- Presence of *tophi* (deposits of mineral salts), primarily in the tissues of fingers, hands, and toes

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

GOUT

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide low-purine diet • Administer medications • Encourage fluids • Use cold packs to relieve inflammation • Provide bed rest and joint immobilization during attacks • Encourage physical activity as tolerated • Use bed cradle to prevent pressure from linens on great toe
• Continually monitor patient's condition	• Observe for signs of tophi

• Plan for patient's discharge	• Emphasize the need for a low-purine diet and adequate fluids • Encourage bed rest and joint immobilization during attacks • Emphasize the need to keep uric acid levels within a normal range by continuing to take medications even when asymptomatic • Discuss the need to avoid stress, fatigue, and infection

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NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology	**Bursitis** — Inflammation of the *bursa*, the padlike sac or cavity in connective tissue surrounding joints.
Causes	• Trauma • Infection • Rheumatoid arthritis
Health care management	• Pain relief • Medications: anti-inflammatory agents, analgesics, antibiotics • Surgeries: bursectomy, aspiration
ASSESSMENT	**Signs and symptoms**
Bursitis	• Pain and tenderness • Swelling • Limited mobility
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

BURSITIS

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions
Check medication record	
Collect equipment	
Promote healing	Administer medications Encourage physical activity as tolerated Encourage bed rest when needed Encourage increased fluid intake
Continually monitor patient's condition	Observe for onset or change in symptoms
Plan for patient's discharge	Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 7

Choose the correct word or phrase to complete statements about neoplastic disorders.

Description and etiology

Multiple myeloma — A malignant neoplastic disease of plasma cells that infiltrates bone marrow and soft tissue, resulting in multiple tumors. The tumors originate in the bone marrow of the sternum, pelvis, and upper ends of long bones. Males above age 40 are most often affected.

Causes

- Autoimmune disorder

Health care management

- Chemotherapy and/or radiation therapy
- Pain relief

ASSESSMENT	**Signs and symptoms**
Multiple myeloma	• Severe bone pain • Frequent infections • Pathologic fractures
Description and etiology	**Osteogenic sarcoma** — A malignant bone tumor. Osteogenic sarcoma starts in the long bones and often metastasizes to other bones and to the lungs. Metastasis often occurs before the patient seeks help.
Risk factors	• Males between the ages of 10 and 25 • Patients with osteitis deformans
Health care management	• Chemotherapy • Surgeries: amputation, femur replacement
ASSESSMENT	**Signs and symptoms**
Osteogenic sarcoma	• Pain • Limited mobility • Fixed, palpable, tender mass over affected area
Description and etiology	**Metastatic bone cancer** — Tumors originating in other areas of the body metastasize and invade the bone. This type is more common than primary malignant bone tumors. Primary malignancy sites are usually the kidneys, thyroid, lungs, prostate, ovaries, and breast. The bones that are most affected are the skull, pelvis, humerus, and femur.
Causes	• Varies
Health care management	• Pain management • Chemotherapy, radiation, hormone therapy, and immunotherapy may be used, depending on the original malignancy site • Surgeries: amputation, excision and resection

ASSESSMENT	**Signs and symptoms**
Metastatic bone cancer	• Pain in affected bone • Pathologic fractures • Fixed, palpable, tender mass with increase in skin temperature over site • Prominent, dilated superficial veins
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

NEOPLASTIC DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pain relief • Provide anti-neoplastic therapy • Administer medications • Ambulate as tolerated • Provide diet high in calories and protein • Encourage increased fluid intake
• Continually monitor patient's condition	• Observe for onset or change in symptoms • Monitor I/O
• Plan for patient's discharge	• Prepare teaching plan – Discuss supportive care – Help patient contact support groups • Assist patients in dealing with amputation, chemotherapy, and radiation therapy

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes.

- Contribute to plan of care update.

OBJECTIVE 8

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the musculoskeletal system.

Description and etiology

Congenital dislocation of the hip – A common deformity caused by a malposition of the head of the femur, which is partially or completely displaced from the hip socket. Because this condition is easier to treat when discovered early, all newborns should be assessed as soon as possible after delivery.

Causes

- Hip malformation
- Fetal position
- Abnormal relaxation of the joint capsule and ligaments

Health care management

- The purpose of treatment is to prevent further dislocation and encourage normal joint formation
- If detected in infancy, displacement can usually be corrected by using devices to maintain the hips in abduction, such as triple diapers or various splints and harnesses
- If the condition is not detected until the child is older, especially if the child has already started walking, more drastic measures must be taken:
  - Traction
  - Closed reduction
  - Hip spica cast
- Surgeries for advanced cases: open reduction
- Parent teaching

ASSESSMENT

Signs and symptoms

Congenital dislocation of the hip

- Limited abduction on affected side
- Jerk or click felt on abduction
- Shortened femur
- Deep, asymmetrical skin folds in thigh and gluteal area
- If child stands on affected leg, pelvis drops on unaffected side (Trendelenburg's sign)

- Delayed walking
- Limping

Description and etiology

Clubfoot (talipes equinovarus) — A common congenital deformity of the foot that involves forefoot adduction and supination and heel inversion. The condition may be unilateral (occurring only in one foot), but is usually bilateral.

Causes

- Unknown (genetic and environmental factors may be involved)

Health care management

- The foot is gradually manipulated into a normal position, casting may be required
- Dennis Brown splints are used with children to correct foot deformities such as clubfoot or other conditions in which the feet turn inward or outward. The splint is worn at night. It consists of a metal bar about 12 inches long with clamps at each end, which are attached to the child's shoes.
- Parent teaching

ASSESSMENT

Signs and symptoms

Talipes equinovarus

- Inverted foot or feet
- Forefoot is adducted and heel is drawn up
- In severe cases, toes may touch the medial side of the lower leg

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Description and etiology

Legg-Calvé-Perthes Disease — A disorder resulting from inadequate blood supply to the *epiphysis* (end) of the femur. The femur undergoes aseptic necrosis, revascularization, and reossification. Without treatment, reossification will result in an abnormal joint. Both legs are usually affected, and the disorder most commonly seen in boys between the ages of 5 and 11. This disorder is commonly known as "Perthes disease."

Causes

- Unknown (may be related to trauma or infection)

Health care management

- Treatment is aimed at preventing joint deformity
- Bed rest followed by light traction
- Casts or braces that prevent dislocation

ASSESSMENT **Signs and symptoms**

Legg-Calvé-Perthes disease

- Pain in affected limb, may be referred to knee
- Limping
- Limitation of motion

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

PEDIATRIC ORTHOPEDIC DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Maintain skin integrity under splints and casts • Assess neurovascular condition of limbs when patient has splint or cast • Encourage ambulation and/or rest as required
• Continually monitor patient's condition	• Observe for onset or change in symptoms
• Plan for patient's discharge	• Prepare teaching plan for parents – Teach cast care – Discuss adapting care practices to the child's condition – Make sure parents understand when splint must be worn and when it may be removed – Stress the importance of follow-up visits to the physician

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

DIAGNOSTIC PROCEDURES

Bone scan – A radioisotope is injected intravenously 2 to 3 hours before the patient undergoes a radioscopic scan. This procedure is used to locate malignancies.

Biopsies

- **Bone** – A small section of bone is removed surgically. The biopsied tissue can be tested for neoplasm or infection.
- **Muscle** – A small section of muscle is removed surgically.

CAT scan (computerized axial tomography) – Radiographic visualization of a transverse section of the body.

EMG (electromyogram) – A skeletal muscle is stimulated with an electric current, causing muscle contractions which are recorded on a graph.

Laboratory studies

- **Leukocyte count** – An increased level of leukocytes in the blood (*leukocytosis*) indicates infection. This test is used to confirm osteomyelitis.
- **Rheumatoid factor titer** – Although there is no single test that can confirm or rule out a diagnosis of rheumatoid arthritis, an elevated rheumatoid factor titer is an indication of disease.
- **Sedimentation rate** – The rate at which red blood cells settle when blood in a test tube is treated with an anticoagulant.
- **Serum uric acid level** – A significantly elevated level of uric acid is present in patients with gout.
- **Synovial fluid** – A needle is used to aspirate a small amount of fluid from the joint capsule. The fluid may shows signs of inflammation or tissue changes from rheumatoid arthritis. After the biopsy is taken the affected area should be elevated and rested to alleviate or prevent pain.

Magnetic resonance imaging (MRI) – Visualization of body tissues using deflection of magnetic energy.

X-ray (also known as radiograph or roentgenograph) – This procedure is used to visualize the musculoskeletal system. It is often used to confirm or rule out bone damage in fractures, osteoporosis, sprains, strains, and dislocations.

SURGICAL PROCEDURES

Amputation – Surgical removal of a limb or part of a limb may be necessary in patients with malignant tumors, injuries, or infections. The amputation can be done at any level of an extremity. The standard site is within a few inches above or below the joint. Phantom pain is a familiar sensation with patients who have experienced an amputation. Burning, itching, tingling, or throbbing is common, and can be a serious obstacle for the patient to overcome.

Arthrodesis – Surgical immobilization of a joint

Arthroplasty – Knee and hip joints are the most common sites for arthroplasty (reshaping or reconstructing a joint). A diseased or damaged joint may be repaired, partially replaced, or totally replaced. This surgery is used to correct degenerative joint disease.

Arthroscopy – Using an arthroscope to visualize a joint

Excision – Sections of bone may be surgically removed from patients with bone tumors or osteomyelitis.

Fixation – Use of a device to hold fractured bone fragments together. The device may be external or internal.

Open reduction – Surgical repair of a fracture. Internal fixation devices such as pins, wires, or plates may be used.

Osteotomy – Surgically cutting through a bone

Synovectomy – Excision of the membrane lining of a joint capsule (synovial membrane)

ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE MUSCULOSKELETAL SYSTEM

II

Name ______________________________ Score ________

OBJECTIVE 9

Plan care for patients with diseases and disorders of the musculoskeletal system.

INTRODUCTION

In this assignment you are given a case study of a hypothetical patient. Care plans are essentially research projects for each of your patients. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care.

Mona Wolf is a 72-year-old patient who was admitted to the hospital for a hip replacement. She will need oral care, the appropriate diet, monitoring of her output, increased fluids, and observation of her skin condition. Supportive care and teaching will be essential elements in the nurse's responsibility during her hospitalization.

DIRECTIONS

Ms. Wolf is your patient. Your instructor will provide a care plan form for you to create a plan for her nursing care.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Use content area vocabulary

Language
- Use standard grammar, spelling, and capitalization

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT SHEET 2 — *APPLY THE NURSING PROCESS TO THE CARE OF THE MUSCULOSKELETAL SYSTEM* — *II*

Name ______________________________ Score ________

OBJECTIVE 10

Plan pre- and postoperative care for a patient undergoing above-the-knee amputation.

INTRODUCTION

In this assignment you are given a case study of a hypothetical patient. Care plans are essentially research projects for each of your patients. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care.

Marvin Washington is a 20-year-old who was recently admitted to the hospital with a diagnosis of osteogenic sarcoma. He is scheduled for an above-the-knee amputation.

DIRECTIONS

Mr. Washington is your patient. Your instructor will provide a care plan form for you to create a plan for his nursing care.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Use content area vocabulary

Language
- Use standard grammar, spelling, and capitalization

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT SHEETS 1 and 2

Care plans should meet the following criteria:

- Nursing process followed
    - Assessment
    - Analysis (under direction of RN)
    - Planning
    - Implementation
    - Outcome/evaluation (under direction of RN)
- Problem stated appropriately
- Nursing actions/interventions include discharge planning

JOB
SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE MUSCULOSKELETAL SYSTEM *II*

Name ______________________________ Score ________

OBJECTIVE 11

Care for a patient with a cast.

INTRODUCTION

A cast is a mold of a body part used to immobilize an extremity that has been injured. Casts are made of layers of plaster of paris, fiberglass, or other material. An orthopedic physician layers strips until the desired thickness and conformity is achieved.

Use an actual case or a scenario provided by your instructor.

EQUIPMENT AND SUPPLIES

- Work sheet
- Pen
- Pillows
- Teaching materials

PROCEDURE

Functional Writing
- Complete forms and records

Interactive Communications
- Give/follow oral directions
- Communicate with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Analyze/synthesize information
- Create a finished product

	Yes	No
Assessment and analysis		
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure as steps are performed.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient.	_____	_____

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Job Acquisition/ Development

- Master specific job task/procedure
- Practice good work habits/attitudes
- Deal effectively with customers/clients/ patients

	Yes	No
3. Wash your hands.	_____	_____
4. Leave cast uncovered to aid in drying process. Handle wet and drying casts with the palms of your hands to avoid indentation.	_____	_____
5. Support cast with pillows to preserve contour and to prevent edema of limb.	_____	_____
6. Assess body part distal to the injury for color and circulation of extremity.	_____	_____
7. Compare unaffected limb with affected limb:		
• Circulation		
– Color	_____	_____
– Temperature	_____	_____
– Edema	_____	_____
– Capillary refill	_____	_____
– Pulse	_____	_____
• Movement	_____	_____
• Sensation		
– Numbness	_____	_____
– Tingling	_____	_____
– Pain	_____	_____
8. Provide self-care instruction:		
• Encourage active and passive exercise of other body parts.	_____	_____

	Yes	No
• Maintain skin integrity around and underneath the cast.	____	____
• Turn frequently and maintain proper alignment.	____	____
• Protect the cast from moisture, dirt and damage by placing waterproof materials around the cast opening, especially in the perineal area.	____	____
• Make sure that patient does not put any objects into cast.	____	____
• Suggest a diet high in protein and calcium to promote healing and high in bulk and fluids to aid in elimination.	____	____
9. Caution patient to not put any objects into cast.	____	____
10. Assess for infection.	____	____
11. Observe for purulent drainage on cast, odor of decaying tissue, or warmth of skin around casted area.	____	____
12. Clean up: Wash your hands.	____	____
13. Document procedure according to agency requirements.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

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PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Used universal precautions throughout procedure	4	3	2	1
Self-care instructions presented in a clear, organized manner at the patient's level of understanding	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the competency profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** - Can perform job with no additional training
3 **Moderately Skilled** - Has performed job during training program; limited additional training may be required
2 **Limited Skill** - Has performed job during training program; additional training is required to develop skill
1 **Unskilled** - Is familiar with process, but is unable to perform job

JOB SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE MUSCULOSKELETAL SYSTEM

II

Name ______________________________ Score ________

OBJECTIVE 12

Care for a patient in traction.

INTRODUCTION

Traction is a system of pulleys, ropes, and weights used to reduce pain, immobilize fractures, prevent or correct deformities, and regain normal alignment or length of an injury. A pulling force is exerted on a body part in a specific direction to overcome the natural force or pull of muscle groups. Traction can be applied to the skin or the skeletal system depending on the type of injury.

Use an actual case or the scenario provided by your instructor.

EQUIPMENT AND SUPPLIES

- Pen
- Work sheet

PROCEDURE

Functional Writing
- Complete forms and records

Interactive Communications
- Give/follow oral directions

Cognitive Activities
- Collect/record information
- Analyze/synthesize information
- Create a finished product

	Yes	No
Assessment and analysis		
1. Check physician's orders.	____	____
2. Identify patient.	____	____
3. Observe patient's condition; chart any changes.	____	____
Planning		
1. Reassure patient and explain procedure as steps are performed.	____	____
2. Prepare for procedure.	____	____
Implementation		
1. Collect equipment.	____	____
2. Wash your hands.	____	____

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Job Acquisition/ Development

- Master specific job task/procedure
- Practice good work habits/attitudes
- Deal effectively with customers/clients/ patients

Yes No

3. Support affected area with appropriate materials. ____ ____

NOTE: Some physicians prefer the use of pillows, while other physicians prefer sandbags. The major objective is to keep the patient's limb in proper alignment.

4. Encourage patient to periodically exercise feet if traction has been applied to legs, or hands if traction has been applied to arms. ____ ____

⚠ **CAUTION:** Never remove the weights without a physician's order.

5. Check pulleys and ropes frequently to make sure that ropes are in grooves and that weights are hanging free of the bed. ____ ____

6. Assess body part distal to the injury for color and circulation of extremity. ____ ____

7. Compare unaffected limb with affected limb:
   - Circulation
     - Color ____ ____
     - Temperature ____ ____
     - Edema ____ ____
     - Capillary refill ____ ____
     - Pulse ____ ____
   - Movement ____ ____
   - Sensation
     - Numbness
     - Tingling
     - Pain

	Yes	No
8. Keep patient in proper body alignment through an established line of pull by traction.	_____	_____
9. Encourage intake of high protein, high vitamin content meals.	_____	_____
10. Assess urinary system by checking I & O, observing for abdominal distention, and noting symptoms of infection.	_____	_____
11. Prevent the hazards of immobility.		
• Encourage patient to breathe deeply and turn frequently if possible.	_____	_____
• Encourage intake of fluids and easily digested food with enough bulk to prevent constipation.	_____	_____
• Provide active and passive ROMs.	_____	_____
• Turn the patient frequently.	_____	_____
• Protect vulnerable skin areas.	_____	_____
• Avoid putting pressure on major blood vessels.	_____	_____
12. Encourage patient to be as independent as possible.	_____	_____
13. Maintain skin integrity.	_____	_____
14. Keep pin site clean and dry; perform other pin site care as instructed by physician.	_____	_____
15. Use a fracture pan for elimination, if appropriate.	_____	_____

NOTE: A fracture pan is easier to slip under a patient's hips and is more comfortable to use than a regular bedpan.

	Yes	No
16. Provide moral support and diversional activities.	_____	_____
17. Clean up: Wash your hands.	_____	_____
18. Document procedure according to agency requirements.	_____	_____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Provided care for patient in traction	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Used universal precautions throughout procedure	4	3	2	1
Self-care instructions presented in a clear, organized manner at the patient's level of understanding	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1

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EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the competency profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** - Can perform job with no additional training

3 **Moderately Skilled** - Has performed job during training program; limited additional training may be required

2 **Limited Skill** - Has performed job during training program; additional training is required to develop skill

1 **Unskilled** - Is familiar with process, but is unable to perform job

BEST COPY AVAILABLE

JOB SHEET 3 — APPLY THE NURSING PROCESS TO THE CARE OF THE MUSCULOSKELETAL SYSTEM — II

Name ______________________________ Score ________

OBJECTIVE 13

Wrap the stump of an amputee.

INTRODUCTION

Amputation may be necessitated by accident, tumor, peripheral vascular insufficiency, infection, thermal injury, and deformity. The loss of an extremity is physically and emotionally traumatic. Nurses can help patients recover by providing supportive care. Patients experience grief after losing a body part. They find adjustment extremely difficult because they view themselves as no longer being whole. Many patients wear a prostheses after an amputation. Before a prostheses can be applied, the stump must be conditioned. The nurse must monitor the drainage and wrap the stump. The site of amputation will determine how well the prosthesis will fit. If conditioning is not done correctly, the patient will have problems fitting and wearing the prosthesis.

EQUIPMENT AND SUPPLIES

- Elastic bandages
  - Four-inch width for below-knee amputation
  - Six-inch width for above-knee amputation
- Clips or tape
- Soap and water
- Towel and wash cloth

PROCEDURE

Functional Writing
- Complete forms and records

Interactive Communications
- Give/follow oral directions
- Communicate with clients/customers/patients

	Yes	No
Assessment and analysis		
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure as steps are performed.	_____	_____
2. Prepare for procedure.	_____	_____

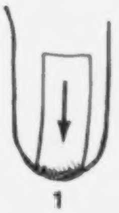
BEST COPY AVAILABLE

Cognitive Activities
- Collect/record information
- Analyze/synthesize information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes
- Deal effectively with customers/clients/ patients

Implementation	Yes	No
1. Collect equipment.	____	____
2. Wash your hands.	____	____
3. Expose amputation stump.	____	____
4. Cleanse skin with soap and water.	____	____
5. Bandage stump:		
a. For long stump or below-knee stump		
1) Place end of elastic bandage high on anterior surface of leg.	____	____
2) Unroll bandage to extend over end of stump and up on posterior surface. (Figure 1)	____	____

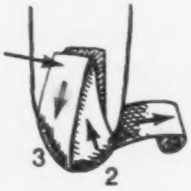
FIGURE 1



3) Repeat maneuver two more times.	____	____
4) Turn bandage to begin a circular spiral. (Figure 2)	____	____

FIGURE 2

Patient can hold this



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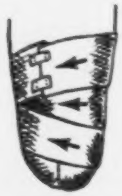
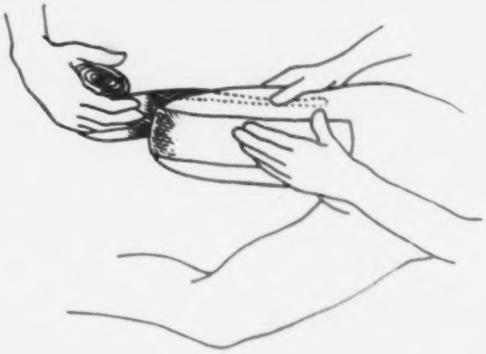
	Yes	No
5) Continue spiral until all of bandage is used.	____	____
6) Secure bandage with clips or tape. (Figure 3)	____	____

FIGURE 3



	Yes	No
b. For above-knee stump.	____	____
1) Place end of elastic bandage high on anterior surface of leg.	____	____
2) Unroll bandage to extend over end of stump and up on posterior surface. (Figure 4)	____	____

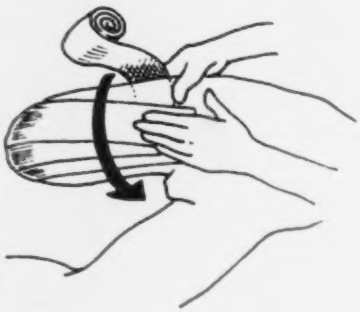
FIGURE 4



	Yes	No
3) Repeat maneuver to cover end of stump snugly.	____	____
4) Turn bandage to begin a circular spiral. (Figure 5)	____	____

Yes No

FIGURE 5



5) Continue circular turns toward top of stump, across back of stump, and around body toward waist. (Figures 6 and 7) ____ ____

FIGURE 6

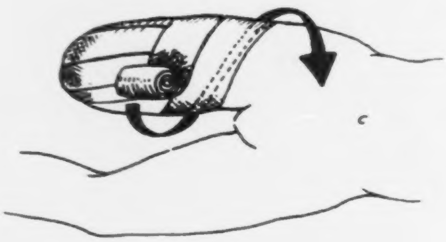
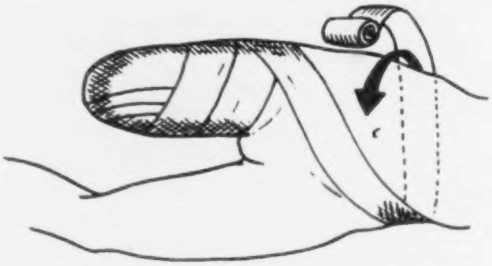


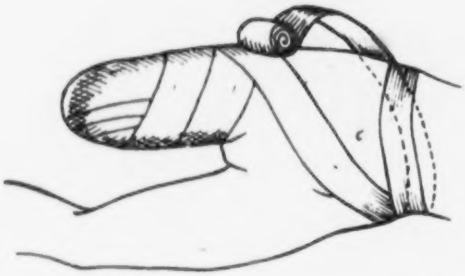
FIGURE 7



6) Encircle waist one complete turn. (Figure 8) ____ ____

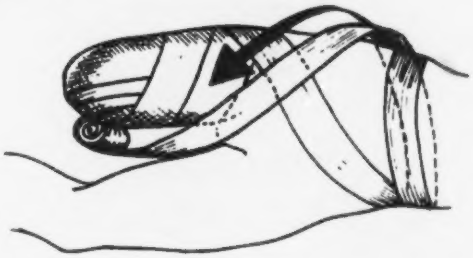
Yes No

FIGURE 8



7) Bring bandage from back of waist diagonally down onto front of leg. (Figure 9) ____ ____

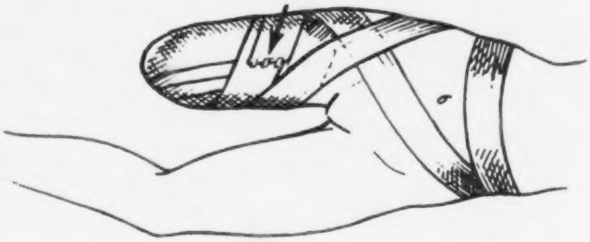
FIGURE 9



8) Encircle stump with remainder of bandage; secure end. (Figure 10) ____ ____

Yes No

FIGURE 10



6. Permit patient to assist as able. _____ _____

7. Clean up:

    a. Clean reusable equipment. _____ _____

    b. Properly discard disposable equipment. _____ _____

    c. Wash your hands. _____ _____

8. Document procedure according to agency requirements. _____ _____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Used universal precautions throughout procedure	4	3	2	1
Self-care instructions presented in a clear, organized manner at the patient's level of understanding	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the competency profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** - Can perform job with no additional training
3 **Moderately Skilled** - Has performed job during training program; limited additional training may be required
2 **Limited Skill** - Has performed job during training program; additional training is required to develop skill
1 **Unskilled** - Is familiar with process, but is unable to perform job

JOB SHEET 4

APPLY THE NURSING PROCESS TO THE CARE OF THE MUSCULOSKELETAL SYSTEM

II

Name ______________________________ Score ________

OBJECTIVE 14

Place abductor pillows.

INTRODUCTION

Proper positioning of patients can prevent complications and promote comfort and healing. Maintaining proper alignment can also shorten the recovery period, because the patient can regain mobility more quickly by preventing complications that sometimes develop with improper positioning. Turning the patient every two hours helps prevent bed sores and contractures.

EQUIPMENT AND SUPPLIES

- Several standard size pillows

PROCEDURE

Functional Writing
- Complete forms and records

Interactive Communications
- Give/follow oral directions
- Communicate with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Analyze/synthesize information
- Create a finished product

	Yes	No
Assessment and analysis		
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure as steps are performed.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Wash your hands.	_____	_____

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Job Acquisition/ Development

- Master specific job task/procedure
- Practice good work habits/attitudes
- Deal effectively with customers/clients/ patients

	Yes	No
3. Discuss with the patient the need for his or her cooperation.	_____	_____
4. Reassure the patient.	_____	_____
5. Inspect the patient's skin for sores or reddened areas.	_____	_____
6. Position the patient:		
• **To position the patient laterally:**		
a. Help the patient to the desired position.	_____	_____
b. Place a pillow under the patient's head so the neck is straight.	_____	_____
c. Place a pillow behind the shoulders.	_____	_____
d. Place a pillow behind the back.	_____	_____
NOTE: Make sure the pillows are pressed firmly against the patient.		
e. Extend the bottom leg in a straight line with the shoulders, and flex the top leg.	_____	_____
f. Place a pillow between the thighs and the calves to extend from the groin to the ankles.	_____	_____
g. Partially extend the bottom arm and place it on the bed.	_____	_____
h. Partially flex the top arm and place it on a pillow.	_____	_____
• **To position the patient supine:**		
a. Help the patient to the desired position.	_____	_____
b. Place a pillow under the head so the neck is straight.	_____	_____

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	Yes	No
c. Position the extremities so they are in a straight line with the shoulders.	_____	_____
d. Place pillows between the legs to extend from the groin to the ankles.	_____	_____
e. Partially flex the arms and place them on pillows.	_____	_____
• **To position the patient prone:**		
a. Help the patient to the desired position.	_____	_____
b. Turn the head to one side.	_____	_____
c. Position the body in a straight line.	_____	_____
d. Extend the feet so they hang over the end of the bed.	_____	_____
e. Place pillows between the legs to extend from the groin to the ankles.	_____	_____
f. Partially flex the arms so the palms are resting flat on the bed.	_____	_____
7. Cover the patient.	_____	_____
8. Provide self-care instructions.	_____	_____
9. Wash your hands.	_____	_____
10. Document procedure according to agency requirements.	_____	_____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

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PRODUCT EVALUATION

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Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Used universal precautions throughout procedure	4	3	2	1
Self-care instructions presented in a clear, organized manner at the patient's level of understanding	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the competency profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

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WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE MUSCULOSKELETAL SYSTEM II

Name ______________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the musculoskeletal system to their correct definitions. Write the correct letter in the blank.

_____ 1. Mass resulting from coagulation of blood in a tissue or cavity

_____ 2. Manipulation by a doctor that results in bringing broken bone ends together

_____ 3. Any nerve disease

_____ 4. Abnormal shortening of muscle resulting in restricted movement of a body part

_____ 5. Solid mold made of fiberglass, plaster of paris, or other synthetic material that is applied directly to an affected limb and provides immobility for the injured part

_____ 6. Cracking, grating sensation or sound

_____ 7. Surgical procedure that involves cleaning the area and attaching the bone ends

_____ 8. An asymmetric hemorrhage area of the skin; a bruise

_____ 9. Break in a bone

a. bruise
b. cast
c. complete
d. closed reduction
e. contracture
f. crepitus
g. ecchymosis
h. fracture
i. hematoma
j. neuropathy
k. open reduction
l. parapsia
m. reniform
n. stricture
o. systemic

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OBJECTIVE 2 **Choose the correct word or phrase to complete statements about soft tissue disorders.** Write the correct letter in the blank.

_____ 1. Ecchymoses and hematomas are seen in a

a. contusion
b. sprain
c. strain
d. dislocation

_____ 2. Congenital defects, spontaneous strictures, or trauma may cause a

a. contusion
b. dislocation
c. sprain
d. strain

_____ 3. An injury from torn ligaments resulting in immobility and ruptured blood vessels is a

a. dislocation
b. strain
c. sprain
d. contusion

_____ 4. If a patient has a strain, it was probably caused by

a. stretching, blunt force, overuse
b. spontaneous strictures, congenital defects
c. wrenching, twisting, trauma
d. overuse, excessive stress, overstretching

_____ 5. Health care management for a patient with a contusion includes

a. heat
b. ice pack
c. immobilization
d. reduction

_____ 6. Signs and symptoms of a contusion include

a. affected extremity may appear longer or shorter
b. discoloration and swelling
c. limited joint function
d. stiffness

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____ 7. Signs and symptoms of a dislocation include

a. affected extremity may appear longer or shorter
b. discoloration and swelling
c. limited joint function
d. stiffness

____ 8. Signs and symptoms of a sprain include

a. affected extremity may appear longer or shorter
b. discoloration and swelling
c. limited joint function
d. stiffness

____ 9. Signs and symptoms of a strain include

a. limited joint function
b. loss of function of affected muscle
c. pain and tenderness which may not appear for several hours after injury
d. rapid, painful swelling

____ 10. Vascular or nerve injury may be present in a patient with a

a. contusion
b. dislocation
c. sprain
d. strain

____ 11. Health care management for a patient with a sprain includes

a. apply heat
b. neurovascular assessment
c. reduction and immobilization
d. treat as a fracture until proved otherwise

____ 12. When implementing the plan to promote healing for a patient with soft tissue disorders, you will

a. apply heat
b. elevate affected part to reduce edema
c. massage affected area
d. provide range-of-motion exercises

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OBJECTIVE 3

Choose the correct word or phrase to complete statements about bone fractures. Write the correct letter in the blank.

_____ 1. A break across the entire cross-section of a bone, with bone frequently displaced from the normal position, describes a ________________ fracture.

a. complete
b. closed
c. open
d. incomplete

_____ 2. Specific types of fractures include

a. impacted
b. incomplete
c. compression
d. oblique

_____ 3. A closed fracture is sometimes referred to as a ________________ fracture.

a. complete
b. greenstick
c. incomplete
d. simple

_____ 4. A break that occurs at a right angle to the bone axis is called

a. oblique
b. compression
c. transverse
d. pathologic

_____ 5. Fractures that slant across the bone are

a. oblique
b. spiral
c. impacted
d. compression

_____ 6. Fractures where bones collapse inward are

a. spiral
b. greenstick
c. pathologic
d. compression

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_____ 7. If one bone is driven into another, the fracture is called

a. pathologic
b. transverse
c. impacted
d. oblique

_____ 8. Fractures involving weak bones that break with little or no force are called

a. compression
b. greenstick
c. pathologic
d. transverse

_____ 9. Greenstick fractures are more common in children because their bones are

a. brittle
b. malformed
c. short
d. soft

_____ 10. Health care management for a patient with a fracture includes

a. apply ice or cold compress
b. control infection and pain
c. provide soft diet
d. restrict fluids

_____ 11. Patients with ____________ fractures have an increased risk of infection.

a. greenstick
b. oblique
c. open
d. spiral

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Leonard Dodger is a 32-year-old carpenter who was brought into the emergency room with a compound fracture of the tibia. He was x-rayed and sent to surgery for an open reduction. A cast was applied, and he was admitted to the orthopedic unit. Leonard is in pain; he is also angry because he cannot work. Leonard is your patient.

Questions 12-15 apply to the above situation.

_____ 12. While you are doing your assessment of Leonard, you will likely observe

a. edema, spasms, pain on movement
b. weakness, numbness, fever
c. ecchymosis, edema, pain
d. headache, nausea, swelling

_____ 13. You check the cast and observe the skin for all EXCEPT

a. foul odor
b. skin irritation
c. infection
d. cast length

_____ 14. If Leonard develops a complication, it would most likely be

a. hypothermia
b. hypertension
c. pulmonary embolism
d. shock

_____ 15. When checking Leonard's traction, you will observe all items EXCEPT

a. pulleys
b. knots
c. ropes
d. plates

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OBJECTIVE 4

Choose the correct word or phrase to complete statements about joint disorders. Write the correct letter in the blank.

_____ 1. A ganglion cyst is defined as

a. abscess of the carpal tunnel of the wrist
b. cystic tumor in a tendon sheath
c. inflammation of a tendon
d. neuropathy from pressure on the median nerve

_____ 2. Carpal tunnel syndrome is defined as

a. abscess of the carpal tunnel of the wrist
b. cystic tumor in a tendon sheath
c. inflammation of a tendon
d. neuropathy from pressure on the median nerve

_____ 3. Tendonitis is defined as

a. abscess of the carpal tunnel of the wrist
b. cystic tumor in a tendon sheath
c. inflammation of a tendon
d. neuropathy from pressure on the median nerve

_____ 4. Repetitive motions of the fingers may cause

a. a ganglion cyst
b. carpal tunnel syndrome
c. tendonitis
d. tennis elbow

_____ 5. Contusions or strains that gradually weaken the sheath surrounding the nerves may cause

a. a ganglion cyst
b. carpal tunnel syndrome
c. tendonitis
d. tennis elbow

_____ 6. Health care management for carpal tunnel syndrome includes

a. applications of heat or cold
b. local injection of steroids
c. nonsteroidal anti-inflammatory agents
d. surgical removal for cosmetic reasons

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_____ 7. Health care management for a ganglion cyst includes

a. applications of heat or cold
b. local injection of steroids
c. non-narcotic analgesics
d. surgical removal for cosmetic reasons

_____ 8. What kind of medication would be prescribed for a patient with tendonitis?

a. antibiotics
b. tetanus toxoid
c. nonsteroidal anti-inflammatory agents
d. salicylates

_____ 9. When implementing the plan to promote healing for a patient with carpal tunnel syndrome, you would

a. apply cold packs
b. elevated affected limb
c. provide range-of-motion exercises
d. use splint to immobilize affected area

_____ 10. Signs and symptoms of a ganglion cyst include

a. burning pain or tingling
b. difficulty grasping objects
c. round, firm nodule
d. weakness of an extremity

_____ 11. Signs and symptoms of carpal tunnel syndrome include

a. inability to move wrist
b. numbness of thumb and fingers
c. painless nodule on back of wrist
d. swelling of affected extremity

_____ 12. The teaching plan for a patient with tendonitis should include

a. discuss preventive measures
b. emphasize the need for range-of-motion exercises
c. instruct patient to keep affected limb elevated
d. teach patient how and when to use medications

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_____ 13. Signs and symptoms of tendonitis include

a. painless swelling and edema
b. pain that is aggravated by motion
c. pain that is alleviated by motion
d. sharp, shooting pain

OBJECTIVE 5

Choose the correct word or phrase to complete statements about degenerative disorders of the skeletal system. Write the correct letter in the blank.

_____ 1. Osteoporosis is a disease that is characterized by

a. a bone infection
b. excessive mineral deposits
c. bones that are soft and thick
d. loss of bone mass

_____ 2. Risk factors for osteoporosis include

a. late menopause
b. open fracture
c. sedentary lifestyle or immobilization
d. prolonged use of antibiotics

_____ 3. Patients with osteoporosis may be given
a. corticosteroids
b. progesterone
c. salicylates
d. vitamin D supplements

_____ 4. Signs and symptoms of osteoporosis include

a. backache
b. edema
c. limited mobility
d. low-grade fever

_____ 5. The teaching plan for patients with osteoporosis should include

a. advise patient to limit protein intake
b. encourage regular exercise
c. stress the need for a soft mattress
d. teach patient to use aseptic technique

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_____ 6. Osteomyelitis is characterized by

a. bone inflammation
b. brittle, porous bones
c. involvement of the heart and CNS
d. joint degeneration

_____ 7. Osteomyelitis is caused by

a. drug use, especially steroids
b. infection
c. lack of vitamin D
d. neoplasm

_____ 8. Health care management for patients with osteomyelitis includes

a. accident prevention
b. encourage rest
c. fixation
d. salicylates

_____ 9. Signs and symptoms of osteomyelitis include

a. "dowager's hump"
b. loss of function
c. muscle weakness
d. pain and tenderness in affected part

_____ 10. When implementing the plan to promote healing for a patient with osteomyelitis, you would

a. apply warm compresses
b. provide assistive devices for ADL
c. provide supplements of calcium and vitamin D
d. use surgical asepsis when treating wounds or changing dressings

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OBJECTIVE 6 **Choose the correct word or phrase to complete statements about connective tissue disorders.** Write the correct letter in the blank.

_____ 1. Arthritis secondary to an inflammatory disorder transmitted by ticks is

a. Lyme arthritis
b. degenerative joint disease
c. rheumatoid arthritis
d. tuberculous arthritis

_____ 2. A disease that affects primarily weight-bearing joints, leading to disintegration of the cartilage covering the ends of bones, is

a. degenerative joint disease
b. gout
c. rheumatoid arthritis
d. tuberculous arthritis

_____ 3. Syphilitic arthritis occurs

a. after treatment of syphilis with certain antibiotics
b. in children under 16 with congenital syphilis
c. in the secondary and tertiary stages of syphilis
d. under poor sanitary conditions

_____ 4. Bursitis can be caused by

a. a disorder of purine metabolism
b. changes in surrounding tissue
c. age and obesity
d. infection or trauma

_____ 5. Inflammation of a joint caused by a buildup of uric acid crystals is

a. degenerative joint disease
b. gout
c. rheumatoid arthritis
d. tuberculous arthritis

_____ 6. An inflammatory joint disease that affects children is

a. juvenile rheumatoid arthritis
b. juvenile lupus
c. juvenile bursitis
d. juvenile gout

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____ 7. ______________ may be caused from "wear and tear" on joints from obesity or certain occupations.

a. gout
b. bursitis
c. rheumatoid arthritis
d. degenerative joint disease

____ 8. A chronic, systemic inflammation that causes deformities by destroying cartilage and forming tough tissue that prevents movement is

a. rheumatoid arthritis
b. infectious arthritis
c. degenerative joint disease
d. systemic lupus erythematosus

____ 9. Early signs of Lyme arthritis include

a. anemia and fatigue
b. edema and tenderness of joints
c. red macule or papule that expands into a large round lesion
d. stiffness after rest

____ 10. Health care management for syphilitic arthritis includes

a. antibiotics
b. antineoplastic agents
c. steroids
d. vitamin D supplements

____ 11. Tuberculous arthritis occurs

a. in children under 16
b. in patients with AIDS
c. in the third stage of tuberculosis
d. in untreated tuberculosis

____ 12. Health care management for patients with tuberculous arthritis includes

a. adequate nutrition
b. joint replacement
c. respiratory isolation
d. synovectomy

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_____ 13. When implementing the plan to promote healing for a patient with Lyme, syphilitic, or tuberculous arthritis, you would

a. discourage physical activity
b. encourage increased fluid intake
c. prevent sun exposure
d. provide pre- and postoperative care

_____ 14. When implementing the plan to promote healing for a patient with rheumatoid arthritis or juvenile rheumatoid arthritis, you would

a. apply heat to reduce muscle spasms and stiffness
b. place pillows under affected joints
c. provide low-purine diet
d. use splints and braces to immobilize affected joints

_____ 15. Signs and symptoms of syphilitic arthritis include

a. anemia and fatigue
b. generalized aching
c. tender, swollen joints
d. stiff neck and headache

_____ 16. Health care management for patients with rheumatoid arthritis includes

a. antibiotics
b. low-purine diet
c. prevent exposure to sunlight
d. rehabilitation and adaptation to carry out ADLs

_____ 17. Signs and symptoms of tuberculous arthritis include

a. elevated sedimentation rate
b. edema, inflammation, and pain in joints
c. muscle weakness and low-grade fever
d. tender, swollen joints

_____ 18. Signs and symptoms of rheumatoid arthritis include

a. crepitus
b. deposits of tophi
c. morning stiffness
d. red, inflamed joints

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_____ 19. The teaching plan for a patient with juvenile rheumatoid arthritis should include

a. discuss the need to avoid stress and infection
b. emphasize adequate rest, exercise, and nutrition
c. instruct patient to follow special diet
d. stress the need to avoid spreading disease

_____ 20. Patients with degenerative joint disease may be given

a. antibiotics
b. immunosuppressive agents
c. isoniazid
d. steroids

_____ 21. Health care management for patients with gout includes

a. alter diet to avoid foods with high purine content
b. encourage intake of foods high in iron such as organ meats
c. high-calorie, high-protein diet
d. restricted fluids

_____ 22. Signs and symptoms of bursitis include

a. anemia and low-grade fever
b. fatigue and general weakness
c. morning stiffness
d. swelling and limited mobility

_____ 23. Signs and symptoms of degenerative joint disease include

a. anemia
b. crepitus
c. edema, heat, and discoloration of joints
d. fatigue and body aches

_____ 24. Signs and symptoms of gout include

a. fatigue and body aches
b. low-grade fever
c. pain, generally occurring at night
d. stiffness and loss of mobility

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_____ 25. When implementing the plan to provide care for a patient with bursitis, you would

a. encourage increased fluid intake
b. help patient adapt to limitations and perform ADLs
c. use active and passive ROMs
d. use heat to relieve pain and stiffness

_____ 26. When implementing the plan to provide care for a patient with gout, you would

a. apply warm compresses to relieve pain and inflammation
b. encourage ROMs during attacks
c. prevent sun exposure
d. use bed cradle to prevent pressure from linens on great toe

_____ 27. Gout may be caused by

a. diabetes mellitus
b. genetic tendency
c. neoplasms
d. steroid use

_____ 28. Health care management for patients with bursitis includes

a. aspiration
b. immunosuppressive agents
c. low-purine diet
d. synovectomy

OBJECTIVE 7

Choose the correct word or phrase to complete statements about neoplastic disorders. Write the correct letter in the blank.

_____ 1. A malignant disease of plasma cells that infiltrates bone marrow and soft tissues resulting in tumors is

a. osteochondroma
b. osteogenic sarcoma
c. multiple myeloma
d. metastatic bone cancer

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_____ 2. Osteogenic sarcoma often metastasizes to the

a. prostate
b. breast
c. liver
d. lungs

_____ 3. Health care management for patients with neoplastic disorders includes

a. active and passive ROMs
b. low-fat diet
c. pain management
d. Dennis Brown splint

_____ 4. Bones usually affected by metastatic bone cancer include the

a. skull and pelvis
b. radius and ulna
c. tibia and sternum
d. vertebrae

_____ 5. Risk factors for osteogenic sarcoma include

a. children under 16
b. female between puberty and menopause
c. male between 10 and 25
d. male over 55

_____ 6. Signs and symptoms of multiple myeloma include

a. frequent infections
b. edema and heat over site
c. low-grade fever of undetermined origin
d. malaise

_____ 7. Signs and symptoms of metastatic bone cancer include

a. anemia and fatigue
b. limited mobility
c. pathologic fractures
d. ecchymosis over site

May be photocopied for student use

____ 8. Signs and symptoms of osteogenic sarcoma include

- a. anemia and fatigue
- b. fixed, palpable, tender mass over affected area
- c. frequent infections
- d. prominent, dilated superficial veins

____ 9. When implementing the plan to promote healing for patients with neoplastic disorders, you would

- a. apply ice packs to relieve pain
- b. use bed cradle to prevent pressure from linens
- c. prevent sun exposure
- d. provide diet high in calories and protein

OBJECTIVE 8

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the musculoskeletal system. Write the correct letter in the blank.

____ 1. A jerk or click felt when abducting an infant's hip is a symptom of

- a. congenital dislocation of the hip
- b. Legg-Calvé-Perthes disease
- c. coxa plana
- d. clubfoot

____ 2. In a severe case of __________, the toes of the affected leg may touch the medial side of the lower leg.

- a. congenital dislocation of the hip
- b. Legg-Calvé-Perthes disease
- c. coxa plana
- d. talipes equinovarus

____ 3. A child with ______________ may have referred pain in the knee.

- a. congenital dislocation of the hip
- b. Legg-Calvé-Perthes disease
- c. clubfoot
- d. talipes equinovarus

May be photocopied for student use

______ 4. Using triple diapers on an infant may correct an early case of

a. congenital dislocation of the hip
b. Legg-Calvé-Perthes disease
c. clubfoot
d. talipes equinovarus

______ 5. A Dennis Brown splint is used to correct

a. congenital dislocation of the hip
b. Legg-Calvé-Perthes disease
c. coxa plana
d. clubfoot

______ 6. Congenital dislocation of the hip is defined as

a. a common congenital deformity that involves forefoot adduction and supination and heel inversion
b. a common deformity caused by a malposition of the head of the femur
c. a disorder resulting from inadequate blood supply to the epiphysis of the femur
d. a neuropathy caused by fetal position or trauma during birth

______ 7. Clubfoot is defined as

a. a common congenital deformity that involves forefoot adduction and supination and heel inversion
b. a common deformity caused by a malposition of the head of the femur
c. a disorder resulting from inadequate blood supply to the epiphysis of the femur
d. a neuropathy caused by fetal position or trauma during birth

______ 8. Legg-Calvé-Perthes disease is defined as

a. a common congenital deformity that involves forefoot adduction and supination and heel inversion
b. a common deformity caused by malposition of the head of the femur
c. a disorder resulting from inadequate blood supply to the epiphysis of the femur
d. a neuropathy caused by fetal position or trauma during birth

May be photocopied for student use

_____ 9. Health care management for patients with Legg-Calvé-Perthes disease includes

a. bed rest followed by light traction
b. closed reduction
c. gradual manipulation of the foot into a normal position
d. triple diapers

_____ 10. When implementing the plan to promote healing for a patient with a pediatric orthopedic disorder, you would

a. apply cold packs to inflamed areas
b. remove splints and casts for ROMs
c. place pillows under painful joints
d. maintain skin integrity under splints and casts

NOTE: Objectives 9-14 are evaluated on Job Sheets/Assignment Sheets in this unit. If you have not completed these components, see your instructor.

May be photocopied for student use

WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE MUSCULOSKELETAL SYSTEM

II

OBJECTIVE 1

1. i
2. d
3. j
4. e
5. b
6. f
7. k
8. g
9. h

OBJECTIVE 2

1. a
2. b
3. c
4. d
5. b
6. b
7. a
8. c
9. c
10. b
11. d
12. b

OBJECTIVE 3

1. a
2. b
3. d
4. c
5. a
6. d
7. c
8. c
9. d
10. b
11. c
12. c
13. d
14. c
15. d

OBJECTIVE 4

1. b
2. d
3. c
4. b
5. a
6. b
7. d
8. c
9. d
10. c
11. b
12. a
13. b

OBJECTIVE 5

1. d
2. a
3. d
4. d
5. b
6. a
7. b
8. a
9. d
10. d

OBJECTIVE 6

1. a
2. a
3. c
4. d
5. b
6. a
7. d
8. a
9. c
10. a
11. d
12. c
13. b
14. a
15. c
16. d
17. b
18. c
19. b
20. d
21. a
22. d
23. b
24. c
25. a
26. d
27. b
28. a

OBJECTIVE 7	1.	c	6.	a
	2.	d	7.	c
	3.	c	8.	b
	4.	a	9.	d
	5.	c		
OBJECTIVE 8	1.	a	6.	b
	2.	d	7.	a
	3.	b	8.	c
	4.	a	9.	a
	5.	d	10.	d

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE CENTRAL NERVOUS SYSTEM

III

INTRODUCTION

The brain and spinal cord, with all the connecting branches and extensions, comprise the central nervous system (CNS). The CNS coordinates and governs the body's activities. Electrical impulses travel along the nerves to all parts of the body and act as a signaling device, transmitting messages that stimulate the body to respond. Impaired function of the CNS, usually a result of chronic conditions or accidents, causes long-term disabilities. Because patients often do not fully regain bodily function from diseases and disorders of the CNS, they must try to gain the highest level of function possible. The nurse must provide a great deal of supportive care.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit, you will be able to recognize diseases and disorders of the central nervous system and associated nursing processes. In addition, you will demonstrate these competencies by completing Assignment Sheets, Job Sheets, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the central nervous system to their correct definitions.

2. Choose the correct word or phrase to complete statements about components of a basic neurological assessment.

3. Choose the correct word or phrase to complete statements about increased intracranial pressure (IICP).

4. Choose the correct word or phrase to complete statements about seizures.

5. Choose the correct word or phrase to complete statements about trauma to the central nervous system.

6. Choose the correct word or phrase to complete statements about infectious diseases of the central nervous system.

7. Choose the correct word or phrase to complete statements about cerebral vascular disorders of the central nervous system.

8. Choose the correct word or phrase to complete statements about benign and malignant neoplasms of the central nervous system.

9. Choose the correct word or phrase to complete statements about degenerative diseases of the central nervous system.

10. Choose the correct word or phrase to complete statements about miscellaneous disorders of the central nervous system.

11. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the central nervous system.

12. Describe treatment adaptations for children with subdural hematoma and bacterial meningitis.

13. Plan care for patients with diseases and disorders of the central nervous system. (Assignment Sheet)

14. Perform a neurocheck on a patient. (Job Sheet 1)

15. Assist with a lumbar puncture. (Job Sheet 2)

16. Care for a patient with a neurological deficit. (Job Sheet 3)

APPLY THE NURSING PROCESS TO THE CARE OF THE CENTRAL NERVOUS SYSTEM

PREPARATION

- Review unit and plan presentation.

- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.

- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objectives 1-3, basic information that supports the rest of the unit;

  Part 2 — Objectives 4-6, the first three groupings of diseases and disorders of the central nervous system, including seizures, trauma, and infectious diseases;

  Part 3 — Objectives 7-10, the next four groupings, including cerebral vascular disorders, neoplasms, degenerative diseases, and miscellaneous disorders; and

  Part 4 — Objectives 11-12, pediatric disorders and treatment adaptations for children.

- Review teaching suggestions and plan classroom activities.

- Determine how you will schedule time for students to demonstrate competence in the required procedures.

- Order materials to supplement unit.

- Invite a guest speaker to discuss diseases and disorders of the central nervous system.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet, and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.

- Obtain models and large pictures of the central nervous system.

- Make a poster of the central nervous system.

- Make a bulletin board showing the central nervous system.

- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration

  — Assist students to conduct a chapter service project on diseases and disorders of the central nervous system.

  — Develop objectives for service project and identify a theme.

  — Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.

  — Plan a community or school health project that involves creating information pamphlets about diseases and disorders of the central nervous system.

  — Develop and/or participate in a community teaching project that involves diseases and disorders and proper care of the central nervous system.

- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administrative practices and responsibilities that may vary with the location and type of agency.

- Remind students to respect patient confidentiality when discussing personal experiences.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the central nervous system to their correct definitions.

- Discuss standard diagnostic tests and laboratory studies. Refer to *Medical-Surgical Nursing I*: Unit I, "Applying Basic Principles of Medical-Surgical Care."

- Discuss terms associated with the central nervous system.

- Have students play reinforcement games and work crossword puzzles using terms.

- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about components of a basic neurological assessment.

- Have students share relevant incidents about friends or family members who have problems related to loss of body function.
- Review the process of neurological assessment.
- Have students share ideas that might be helpful in doing a complete neurological assessment.
- Provide a copy of and discuss the International Classification of Epileptic Seizures.
- Refer student to Job Sheet 1 for information on the Glasgow Coma Scale.
- Stress that students will use the information in this section to complete Job Sheet 1.

Objective 3: Choose the correct word or phrase to complete statements about increased intracranial pressure (IICP).

- Review the structures of the brain and spinal cord.
- Have students share relevant incidents about friends or family members who have problems related to ICCP.
- Have students share ideas related to the care of patients with problems associated with conditions in this section.
- Refer students to Supplements 1 and 2 for related diagnostic procedures and descriptions of surgical procedures.
- Stress that students will use the information in this section to complete Job Sheet 2.
- Review the nursing process.
- Remind students that the charts throughout the Information Sheets are information charts, not plans of care.

Objective 4: Choose the correct word or phrase to complete statements about seizures.

- Have students share relevant incidents about friends or family members who have problems related to seizures.
- Have students share ideas related to the care of patients with problems associated with conditions in this section.

- Have students talk about any experiences with people who have had seizures. Review what a nurse should do when caring for a patient with seizures.

- Post a list of nursing interventions for seizures. Refer student to Chapter 19 of Long and Phipps': *Medical-Surgical Nursing: A Nursing Process Approach* for more information.

Objective 5: Choose the correct word or phrase to complete statements about trauma to the central nervous system.

- Have students share relevant incidents about friends or family members who have problems related to trauma to the central nervous system.

- Have students share ideas related to the care of patients with problems associated with conditions in this section.

- Have students review emergency care for patients who experience trauma.

- Refer students to Supplement 1.

- Have students complete Assignment Sheet 1.

Objective 6: Choose the correct word or phrase to complete statements about infectious diseases of the central nervous system.

- Have students share relevant incidents about friends or family members who have problems related to infectious diseases of the central nervous system.

- Have students share ideas related to the care of patients with problems associated with conditions in this section.

- Discuss other infectious diseases not mentioned in this section.

Objective 7: Choose the correct word or phrase to complete statements about cerebral vascular disorders of the central nervous system.

- Have students share relevant incidents about friends or family members who have problems related to cerebral vascular disorders of the central nervous system.

- Have students share ideas related to the care of patients with problems associated with conditions in this section.

- Discuss vascular disorders not mentioned in this section.

- Stress that students will use the information in this section to complete Job Sheet 3.

Objective 8: Choose the correct word or phrase to complete statements about benign and malignant neoplasms of the central nervous system.

- Have students share relevant incidents about friends or family members who have problems related to benign and malignant neoplasms of the central nervous system.

- Have students share ideas related to the care of patients with problems associated with conditions in this section.

- Discuss types of tumors not mentioned in this section.

- Discuss hyper/hypothermia blankets and their use.

Objective 9: Choose the correct word or phrase to complete statements about degenerative diseases of the central nervous system.

- Have students share relevant incidents about friends or family members who have problems related to degenerative diseases of the central nervous system.

- Have students share ideas related to the care of patients with problems associated with conditions in this section.

- Discuss types of degenerative diseases not mentioned in this section.

Objective 10: Choose the correct word or phrase to complete statements about miscellaneous disorders of the central nervous system.

- Have students share relevant incidents about friends or family members who have problems related to miscellaneous disorders of the central nervous system.

- Have students share ideas related to the care of patients with problems associated with conditions in this section.

- Discuss miscellaneous types of central nervous system diseases and disorders not mentioned in this section.

- Invite a speaker to talk about diseases and disorders of the central nervous system and/or the nursing process.

Objective 11: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the central nervous system.

- Have students share relevant incidents about friends or family members who have problems related to miscellaneous disorders of the central nervous system.
- Have students share ideas related to the care of patients with problems associated with conditions in this section.
- Refer to neonatal units for additional information on pediatric disorders and diseases of the central nervous system.
- Discuss current trends in caring for NAS infants, difficulties in placing abandoned infants, and state legal requirements relevant to mother and child with narcotics dependency.

Objective 12: Describe treatment adaptations for children with subdural hematoma and bacterial meningitis.

- Discuss treatment adaptations for infants and children. Include strategies for psychological and emotional support.

APPLICATION

- Make a video or skit about care of a person with problems associated with the central nervous system. Either students or teachers can be the presenters.
- Students can practice care of the patient with problems associated with this unit.
- Have students present a one-minute speech on care of a patient with problems associated with the central nervous system.
- Use small group activities to research and share information on specific disorders and diseases.

Objective 13: Plan care for patients with diseases and disorders of the central nervous system. (Assignment Sheet)

- Use Assignment Sheet to give students an opportunity to practice ideas that will help when they care for a patient with diseases and disorders of the central nervous system.
- Provide a care plan form for students' use.

Objective 14: Perform a neurocheck on a patient. (Job Sheet 1)

Objective 15: Assist with a lumbar puncture. (Job Sheet 2)

Objective 16: Care for a patient with a neurological deficit. (Job Sheet 3)

- Use Job Sheets to give students hands-on experience in performing a neurocheck, assisting with a lumbar puncture, and caring for a patient with a neurological deficit.
- Use a mannequin to practice and demonstrate procedures in the classroom (Job Sheet 3 is most suited for use in a clinical area).

EVALUATION

Pretest

- Give Written Test as pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.
- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.

- Complete appropriate sections of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.
- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

UNIT REFERENCES

- Betz, Cecily Lynn and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St Louis: Mosby-Year Book, Inc., 1991.
- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.
- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.
- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.

- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.

- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). The C.V. Mosby Company, St. Louis, I990.

OBJECTIVE 1 **Match terms associated with diseases and disorders of the central nervous system to their correct definitions.**

- **aneurysm** — weakening of a vessel wall resulting in a localized area that is dilated and may resemble a balloon or pouch
- **aphasia** — absence or impairment of the ability to communicate through speech and writing due to dysfunction of brain center
- **aura** — feeling or sensation that precedes a migraine headache or epileptic seizure

  NOTE: The signal may be sounds, visual images, smells, warmth, or other sensation
- **clonic** — alternating muscular contraction and relaxation
- **dysphasia** — difficulty in speech communication; not being able to say what one wishes to say
- **epilepsy** — recurring seizures caused by neurological disorders of the brain
- **hemiplegia** — paralysis of one side of the body caused by damage on the opposite side of the brain

  EXAMPLE: The patient who has a CVA on the right side of the brain may suffer paralysis, impaired circulation, and visual disturbances on the left side of the body.
- **ischemia** — insufficient blood supply to tissues; may be temporary or permanent
- **lethargy** — sluggish or slow patient response
- **oliguria** — lower than normal urine output
- **paraplegia** — paralysis of both legs; the trunk may also be paralyzed
- **paresthesia** — tingling, prickling, or numbness

- **petechiae** — small purplish or bluish spots on the skin
- **postictal stage** — the period immediately following a seizure

  NOTE: The patient is worn out, very sleepy, and may be disoriented.
- **quadriplegia** — paralysis of all four limbs and the trunk
- **seizure** — a variety of symptoms resulting from disorganized electrical activity in the brain
- **spina bifida** — a congenital disorder in which there is insufficient closure of the vertebral column
- **strabismus** — crossed or crooked eyes
- **tonic** — muscular contraction

OBJECTIVE 2

Choose the correct word or phrase to complete statements about components of a basic neurological assessment.

Since the nervous system is the pathway from the brain to all areas of the body, neurological assessment must include a variety of sensory and motor functioning, as well as vital signs. The size and site of tissue damage is directly related to the loss of body function.

- **Level of consciousness** — The level of responsiveness, the ability to speak and be understood, intelligence, and orientation
- **Vital signs** — Baseline temperature, pulse, respiration, and blood pressure. Alert the physician if changes occur.
- **Pupillary response** — Changes such as unilateral dilation, slow reaction to light, and fixed or dilated pupils
- **Orientation** — The patient's response to place, time, and person
- **Motor function** — The ability to grasp objects and move the upper extremities or to elevate and move the lower extremities; includes posture, gait, reflex tests, and coordination
- **Sensory performance** — Tactile sensation, identifying objects by the sense of touch, superficial pain, skin sensation, deep tissue sensation, and visual disturbances

OBJECTIVE 3

Choose the correct word or phrase to complete statements about Increased Intracranial pressure (IICP).

Description and etiology

Increased Intracranial pressure — IICP is a very dangerous condition that may occur in a variety of neurological diseases and disorders. Because the cranial cavity is a solid compartment with little room for expansion, IICP from excess blood, cerebrospinal fluid, or swollen tissue can require emergency care. A sudden increase in IICP can create an emergency situation within minutes, resulting in death or severe brain damage.

NOTE: If at any time you think a patient is showing symptoms of IICP, notify the physician immediately.

Causes

- Trauma
- Hemorrhage
- Tumors
- Abscesses
- Hydrocephalus
- Edema
- Inflammation

Health care management

- Continuous monitoring while observing for complications of worsening condition
- Medications: Paralyzing agents or sedatives (small doses) to prevent rise in pressure; anticonvulsants, osmotic diuretics, steroids, and barbiturates to reduce intracranial pressure; stool softeners
- Surgical interventions: May include a craniotomy or a craniectomy.
- Constant monitoring with internal monitoring devices

ASSESSMENT

Signs and symptoms

IICP

NOTE: Progressive deterioration indicates a serious condition and may require immediate surgical intervention.

- Early symptoms
  - Vomiting
  - Headache
  - Change in pupils

- Late symptoms

  NOTE: If symptoms have progressed to the late stages, death is imminent.

  - Cushing's Triad

    ↓ Respiration
    ↑ Blood pressure
    ↓ Pulse

  - Change in level of consciousness — Lack of or change in response to visual, auditory or other stimulation that results in restlessness, confusion, somnolence, lethargy, stupor, semicoma, or coma

    NOTE: Lethargy is the initial sign of IICP. Watch for delayed speech and verbal response.

  - Change in vital signs — Abnormalities of respiration, especially apnea; elevated temperature; slowing of pulse to a rate of 60 or below or rapid rate of 100 or above; widening of pulse pressure; falling diastolic pressure; hypertension

  - Degree of orientation — Lack of ability to accurately state his or her full name, the name of the hospital or the city; and the time of day, day of the week, and month, date, and year

  - Change in vision — Partial or total blindness, pupillary changes such as unilateral dilation, slow reaction to light, and a fixed or dilated pupil

  - Change in motor control — Partial or complete paralysis such as paraplegia, quadriplegia, or hemiplegia; slowed reactions, weakness, and seizure activity

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

INCREASED INTRACRANIAL PRESSURE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer steroids, barbiturates, anticonvulsants, diuretics, and stool softeners • Give pre- and post-operative care if surgery is indicated • Elevate the head of bed • Provide care for patient with seizures
• Continually monitor patient's condition	• Monitor vital signs; I/O • Make a neurological assessment every 15 minutes or until patient is stable; report any changes immediately
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update

OBJECTIVE 4

Choose the correct word or phrase to complete statements about seizures.

Seizures are sudden, transient episodes of abnormal sensory, motor, autonomic, or psychic activity, or a combination of these. Causes include genetic and developmental defects and hypoxemia, fever, head injury, hypertension, vascular insufficiency, electrolyte imbalance, infections of the central nervous system, nutritional deficiencies, brain tumor, allergy, and drug withdrawal. Seizures may be symptomatic of metabolic conditions such as hypoglycemia or certain liver and kidney diseases and toxic conditions such as breathing or ingesting heavy metals, pesticides, or carbon monoxide.

Epilepsies are a symptom-complex of several brain function disorders. They are characterized by recurrent seizures. Abnormal electrical discharge in a section of the brain is thought to cause the seizures. Onset is usually in childhood. Epilepsy is managed with medication specific to the type of seizure and with health education to improve the patient's quality of life.

NOTE: Seizures associated with epilepsies have been renamed. The International Classifications of Epileptic Seizures includes five categories. The older terms are noted in brackets. Refer to Chapter 19 of Long and Phipps' *Medical-Surgical Nursing: A Nursing Process Approach* for nursing care for a patient having seizures.

Complications for all classifications of seizures are

- Respiratory cessation status
- Obstructed airway

PARTIAL SEIZURES

Partial or focal seizures are classified as either (1) simple or partial or (2) complex seizures.

Description and etiology

Partial elementary seizure — characterized by motor symptoms, autonomic symptoms, and compound forms; generally with no loss of consciousness; may be unilateral; common in children

NOTE: Also called *simple partial seizures.*

Health care management

- Protect the patient from injury or harm
- Provide a quiet environment
- Medications: anticonvulsants

ASSESSMENT

Partial elementary seizures

Signs and symptoms

- Focal motor or sensory convulsions [Jacksonian] such as twitching of the hand, head, or eyes or uncontrollable jerking of the mouth; may precede a generalized tonic-clonic [grand mal] seizure
- Person may experience dizziness, unusual or unpleasant sights, sounds, odors, or tastes
- Person may speak nonsense
- Seizure begins with a jerky movement in one part of one side of the body and spreads to other parts of that side, with patient remaining conscious

Description and etiology

Partial complex seizures — characterized by complex symptoms including impairment of consciousness. Symptoms can occur in cognitive, affective, psychosensory, and psychomotor areas, or a combination of these.

NOTE: Also called *complex partial seizures*.

Health care management

- Protect the patient from injury or harm
- Provide a quiet environment
- Medications: anticonvulsants

ASSESSMENT

Signs and symptoms

Partial complex seizures

- Person is motionless or makes motions that are inappropriate for the time and place
- Person may experience intense fear, anger, elation, or irritability
- Person has no memory of the episode when it is over

GENERALIZED SEIZURES

Generalized seizures are bilaterally symmetrical and have no local onset.

NOTE: There are eight categories of generalized seizures. The most common are discussed here.

Description and etiology

Absence [petit mal] — Involves both hemispheres of the brain causing the whole body to react; most common in childhood; occurs without warning. Characterized by sudden impairment or loss of consciousness with few or no tonic-clonic spasms.

Health care management

- Protect the patient from injury or harm
- Provide a quiet environment
- Medications: anticonvulsants

ASSESSMENT

Signs and symptoms

Absence seizure

- Sudden vacant facial expression; eyes focused straight ahead
- Cessation of all motor activity; eyelids may twitch
- Possible loss of muscle tone

Description and etiology

Bilateral massive myoclonus – A muscle group, usually in the trunk or extremities, contracts suddenly and involuntarily.

Health care management

- Protect the patient from injury or harm
- Provide a quiet environment
- Medications: anticonvulsants

ASSESSMENT

Signs and symptoms

Bilateral massive myoclonus

- Rapid, rhythmic muscle jerks, may be mild or forceful
- No loss of consciousness

Description and etiology

Tonic-clonic [grand mal] – Seizures beginning with aura and a characteristic cry followed by unconsciousness and a pattern of rigid muscle spasms with jerky movements, and ending with a period of relaxation. Tonic-clonic seizures cause the patient to temporarily slow or completely stop respirations and appear cyanotic. After the relaxation period, the color returns and normal respirations resume.

NOTE: The nurse should carefully observe and document the stages listed in the above description.

Health care management

- Protect the patient from injury or harm
- Provide a quiet environment
- Medications: anticonvulsants

ASSESSMENT

Signs and symptoms

Tonic-clonic seizure

- Intense rigidity, possibly followed by jerky spasms of muscular relaxation and contraction
- Convulsive movement declines after 1-2 minutes, followed by relaxation and deep coma
- Breathing is noisy
- Patient may chew tongue
- Involuntary urination and defecation

Description and etiology	**Unilateral seizures** – Affecting one side of the body
Health care management	• Protect the patient from injury or harm • Provide a quiet environment • Medications: anticonvulsants
ASSESSMENT	**Signs and symptoms**
Unilateral seizures	• Seizure affects one side of the body only

Description and etiology	**Unclassified seizures** – If data about the type of seizure is not available, the seizure is considered unclassified.
Health care management	• Protect the patient from injury or harm • Provide a quiet environment • Maintain airway • Medications: anticonvulsants
ASSESSMENT	**Signs and symptoms**
Unclassified seizures	• Vary

Description and etiology	**Status epilepticus** – Repeated seizures one after another for at least 30 minutes without patient regaining consciousness in between, although some patients may not lose consciousness during the attack. Brain damage and death can result from these seizures. This is an emergency situation.
Health care management	• Protect the patient from injury or harm • Provide adequate oxygen • Maintain airway • Medications: sedatives, anticonvulsants
ASSESSMENT	**Signs and symptoms**
Status epilepticus	• Repeated seizures

- Seizures lasting at least 30 minutes
- Patient does not regain consciousness between seizures; some patients may not lose consciousness

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

SEIZURES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Observe for signs and symptoms of seizures • Report seizure activity immediately • Instruct patients to take medications properly • Watch all aspects of seizures – Time of onset – Specific parts of body involved – Level of consciousness – Condition after seizure – Time seizures stopped • Document observations
• Continually monitor patient's condition	• Monitor vital signs, I/O • Have suction and airway available • Have patient lie on side • Raise padded side rails • Provide quiet environment • Observe for respiratory cessation or obstructed airway
• Plan for patient's discharge	• Prepare teaching plan – Discuss medication schedule – Emphasize need for a balanced lifestyle – Encourage physical activity • Provide literature on epilepsy and information about national agencies and local support groups

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.

- Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about trauma to the central nervous system.

Blows to the head can cause mild to severe injuries, with or without skull fractures. Trauma can occur as a result of motor vehicle accidents, sports, assault, falls, or bullet wounds. Injuries can occur as a result of traffic accidents. A blow to the head can damage blood vessels, causing a subdural hematoma resulting in IICP. Minor injuries may not cause damage to the brain even when a skull fracture results. If a head injury causes even temporary loss of consciousness, the patient should be observed carefully and the physician should be notified. The nurse should observe for symptoms of IICP for a period of time, and provide pre- and postoperative care, if needed.

Complications of CNS trauma include renal dysfunction with incontinence or oliguria and gastrointestinal function with nausea or vomiting.

Description and etiology

Scalp Injury — A blow to the head may not cause serious damage; however, many blood vessels are concentrated in this area, and excessive bleeding or shock can result from a contusion, abrasion, laceration, or avulsion. All these circumstances can cause bleeding and edema in the affected tissues, resulting in a temporary or permanent condition.

Causes

- Trauma

Health care management

- Treatment for shock, if needed
- Observe for complications
- Control of bleeding
- Cleaning and suturing of wound
- Medications: antibiotics, analgesics
- Observe for signs of infection (bleeding, fever, drainage of spinal fluid or purulent matter)

ASSESSMENT

Signs and symptoms

Scalp injury

- Profuse bleeding
- Possible hematoma and IICP

Description and etiology	**Skull fracture** – Fractures create the possibility of brain injury. Patients are observed for neurosurgical conditions until the extent of injury is known. The fracture may be open or closed. The extent of the injury may or may not be immediately observable, according to the severity of brain damage.
Causes	• Trauma
Health care management	• Affected area must be supported • Observe for symptoms of IICP • Surgery: cranioplasty • Medications: anticonvulsants and antibiotics if cerebrospinal fluid (CSF) leak occurs
ASSESSMENT	**Signs and symptoms**
Skull fracture	• Pressure on affected brain site • Varying levels of IICP if bone fragment presses inward • Leaking of CSF if fracture is open
Description and etiology	**Concussion** – Immediate and temporary impairment of neurologic function caused by a blow to the head
Causes	• Trauma
Health care management	• Observe for symptoms of ischemia, headache, dizziness, vertigo, and amnesia • Medications: Prescribed non-narcotic analgesics
ASSESSMENT	**Signs and symptoms**
Concussion	• Headache • Nausea and vomiting • Disorientation • Varying levels of unconsciousness • Person may have a brief period of unconsciousness and memory loss

Description and etiology

Cerebral contusion — Bruising of the brain surface, with surface hemorrhaging possible

Causes

- Trauma

Health care management

- Hospitalization and observation for symptoms of ischemia and IICP
- Medications: antiemetics

ASSESSMENT

Signs and symptoms

Cerebral contusion

- Loss of consciousness
- Feeble pulse, shallow respiration
- Cold, pale skin
- Visual impairment
- Neurologic alterations, including unusual sensations

Description and etiology

Hematoma — Epidural, subdural, or intracerebral hemorrhaging resulting from craniocerebral trauma. Hematomas can cause IICP and require close observation. An epidural hematoma is considered an extreme emergency. The mortality rate for all three types is high.

NOTE: Refer to Objective 12 for pediatric considerations regarding subdural hematoma.

Causes

- Trauma

Health care management

- Close observation
- Medications: diuretics
- Surgeries: drilling burr holes (openings in the skull) to remove the clot and control bleeding, craniotomy

ASSESSMENT

Signs and symptoms

Hematomas

- Varying degrees of IICP, depending on area of brain and size of hematoma
- Paralysis
- Muscle weakness

- Drowsiness
- Aphasia
- Dilated pupil on affected side

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

HEAD INJURIES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Give pre- and post-operative care, if surgery is indicated • Use seizure precautions
• Continually monitor patient's condition	• Make a neurological assessment every 15 minutes, report any changes • Monitor vital signs, I/O • Observe for complications
• Prepare for patient's discharge	• Prepare teaching plan - Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Spinal cord trauma — The amount of dysfunction is related to the location and extent of the injury, ranging from temporary concussion with full recovery to complete transection, causing paralysis below the injury. Spinal cord trauma causes major health problems and can cause spinal shock. Ischemia, hypoxia, edema and hemorrhagic areas can cause destruction of the myelin and axons. With early treatment, up to 4 to 6 hours after injury, preventing permanent or total spinal cord degeneration is possible. Correct patient transfer techniques are important in preventing additional neurological damage.

Causes

- Trauma

Health care management

- Immobilizing the injury using skeletal tongs or halo devices and observing for infection at the sites
- Traction
- Observation for shock and further paralysis
- Medications: antispasmodics, anti-inflammatories, osmotic agents, steroids
- Surgeries: investigative surgery, debridement, laminectomy
- Complications: edema, loss of motor function

ASSESSMENT

Signs and symptoms

Spinal cord trauma

- Acute local pain; may radiate peripherally along the affected nerve
- Inadequate breathing
- Possible paralysis below the injured area
- Muscular weakness, numbness, tingling, burning
- Muscle spasms
- Incontinence
- Distended bladder or impacted rectum
- Low blood pressure

Description and etiology

Transection of the cord – An injury in which the spinal cord is partially or completely severed, resulting in paraplegia or quadriplegia. Patients with lesions above the 6th thoracic vertebra can develop autonomic dysreflexia or hyperreflexia, a medical emergency that can lead to cerebrovascular accident, blindness, or death.

Causes

- Trauma

Health care management

- See treatment for spinal cord trauma
- Observation for symptoms of autonomic dysreflexia: bradycardia, paroxysmal hypertension, sweating, goose bumps, severe headache, nasal congestion

ASSESSMENT

Signs and symptoms

Transection of the cord

- See symptoms for spinal cord trauma above
- Paralysis of areas below the injured area, including possible respiratory paralysis, depending on the location of the injury

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Description and etiology

Herniated disc – Cartilage plates or discs cushion the vertebral bones. The spinal cord lies within the vertebral structure. Protruding or damaged discs can compress the spinal nerves, causing pain, sensory loss, and muscle weakness. Cervical and lumbar disc compression (herniation) are common; thoracic compression is rare.

Refer to Unit XIV of *Textbook of Medical-Surgical Nursing* (6th ed.) by Brunner, Suddeth, *et. al.*

Causes

- Degeneration
- Tumors
- Trauma

Health care management

- Rest
- Heat
- Traction
- Corset for spinal support

- Medications: analgesics and /or anti-inflammatory drugs, muscle relaxants
- Surgeries: laminectomy, diskectomy

ASSESSMENT

Signs and symptoms

Herniated disc

- Cervical compression
  - Stiffness and pain in neck area, top of shoulders
  - Pain in upper extremities and head
  - Tingling and numbness in upper extremities
- Lumbar compression
  - Low back pain relieved by lying down
  - Impaired sensory and motor function
  - Pain in buttock and thigh
  - Sciatic pain may radiate to calf and ankle
  - Overactivity causes pain
  - Pain is aggravated by trunk flexion, coughing, sneezing

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

SPINAL INJURIES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer prescribed medications • Give pre- and post-operative care, if surgery is indicated • Make a neurological assessment every 25 minutes or until patient is stable, and report any changes immediately
• Continually monitor patient's condition	• Monitor vital signs, I/O • Assess extremities for edema and motor function
• Prepare for patient's discharge	• Prepare teaching plan – Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about infectious diseases of the central nervous system.

NOTE: Central nervous system diseases can be caused by bacteria and viruses secondary to trauma, surgery, or local infection such as an abscessed tooth.

Description and etiology

Meningitis – Inflammation of membranes that cover the brain and spinal cord; infection is spread by nasal discharge from infected persons. Children are particularly susceptible to meningitis as a result of complications from ear infections.

NOTE: Pediatric meningitis can be fatal. The rate of residual damage (epilepsy, learning disorders, hydrocephaly, cerebral palsy, mental insufficiency, sensory loss) and death is high because the disease may remain undetected and/or untreated. Refer to Objective 12 for additional pediatric care.

Causes

- Viral infection
- Bacterial infection

Health care management

- Strict isolation
- Fluid replacement
- Treatment for seizures, including anticonvulsants and muscle relaxants
- Observe for complications
- Provide dark, quiet environment
- Medications: Osmotic diuretics, anticonvulsants, muscle relaxants, sedatives, antipyretics, antibiotics (may be administered by IV or injected directly into the spinal canal), steroids
- Complications: shock, disseminated intravascular coagulation, pneumonia, heart failure, pericarditis, IICP, respiratory difficulty, coma

ASSESSMENT **Signs and symptoms**

Meningitis

- High fever
- Stiffness and pain in neck; resistance to neck flexion
- Severe headache
- Nausea and vomiting
- Stupor, leading to delirium or convulsions
- Seizures in children and adolescents
- Petechiae that may progress to purpuric lesions

Description and etiology

Encephalitis – Inflammation of the brain. Encephalitis can progress quickly and has a mortality rate of about 60%. Careful observation for any change is extremely important. Encephalitis is not contagious among humans, although it may be transmitted by mosquitos or ticks.

Causes

- Syphilis
- Poisoning
- Sequela of bacterial or viral infection

Health care management

- Symptomatic relief and supportive care
- Range-of-motion exercises
- Provide adequate fluids

ASSESSMENT **Signs and symptoms**

Encephalitis

- Abrupt onset with high fever, headache
- Symptoms are similar to meningitis
- 24-36 hours after onset, drowsiness, coma and focal or generalized convulsions usually occur
- Development of hemiplegia and cranial nerve palsies

Description and etiology

Rabies – Infection of the central nervous system. The rabies virus is carried in the saliva of an infected animal and transmitted through a bite or an open wound. Children are often the victims of infected bites. Rabies is almost always fatal.

Causes

- Viral infection

Health care management

- Series of vaccinations and immunizations with hyperimmune serum for 14-21 days

  NOTE: The urgency and lengthy treatment period can be frightening and difficult for children and their families. The prophylactic therapy is painful and is accompanied by side effects such as erythema, pruritus, tenderness at the injection sites, with the possibility of shock.

- If the animal is captured, it may either be observed for the development of rabies or killed to allow examination of brain tissues, possibly ruling out the need for treatment.
- Prevention is important — domestic animals should be vaccinated; wild or unknown animals should be avoided.

ASSESSMENT

Signs and symptoms

Rabies

- General malaise
- Fever
- Sore throat
- Pain and tingling at site of bite
- Periods of excitability followed by convulsions, choking spasms, and maniacal behavior

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Description and etiology

Guillain-Barre syndrome – Polyneuritis (inflammation of a number of peripheral nerves) that attacks the nerve roots and spinal cord following immunization or an infectious disease. Although it is primarily an adult disease, children between 4 and 10 years old are also susceptible. Supportive care is the primary treatment. Most patients have a complete recovery.

NOTE: Also called infectious neuronitis, infectious polyneuritis, and Landry's syndrome

Causes

- Unknown

Health care management

- Treatment is symptomatic
- Corticosteroids may be used in early stages
- Tracheostomy may be required to assist with breathing
- Supportive care
- Range-of-motion exercises

ASSESSMENT

Signs and symptoms

Guillain-Barre syndrome

- Varying degree of muscle weakness to paralysis
- Apnea due to muscle weakness
- Paresthesia of extremities

Description and etiology

Tetanus (lockjaw) – Infection that begins at the site of an injury and spreads, causing spasms in the facial muscles. Tetanus is usually fatal, but can be prevented by immunizations and booster injections.

Causes

- Gram-positive bacteria

Health care management

- Requires intensive care in a quiet environment
- Wound is debrided, cleaned, and may be treated with tetanus immune globulin (TIG)
- Tracheotomy if laryngeospasms are severe
- Supportive care
- Medications: antitoxin therapy, antibiotics for infection, sedatives, muscle relaxants, neuromuscular blocking agents

ASSESSMENT

Signs and symptoms

Tetanus

- Progressive stiffness and tenderness in neck and jaw
- Difficulty in opening mouth
- Spasms in facial muscles
- Difficulty in swallowing

- Rigidity of abdominal and limb muscles
- Rapid pulse
- Diaphoresis

Description and etiology

Botulism – Food poisoning from ingestion of bacteria that cause abdominal cramping and difficulty speaking; usually caused by the ingestion of foods that have been improperly canned or preserved. Botulism is often fatal.

NOTE: Cans that are dented or bulging or foods with a bad odor immediately on opening may be contaminated.

Causes

- Botulin neurotoxin

Health care management

- Respiratory support
- Symptomatic treatment, as ordered by physician
- Medications: IV antitoxin

ASSESSMENT

Signs and symptoms

Botulism

- Adult botulism
  - Weakness
  - Dizziness
  - Acute gastrointestinal cramping
  - Difficulty in speaking
  - Diplopia
  - Vomiting
  - Progressive respiratory paralysis
- Infant botulism
  - Constipation
  - Lethargy
  - Poor feeding
  - General weakness

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

INFECTIOUS DISEASES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer prescribed medications, sedatives, antipyretics, and antibiotics • Provide quiet environment • Encourage bed rest • Use seizure precautions
• Continually monitor patient's condition	• Measure vital signs, I/O • Observe for IICP, shock, coma, or respiratory difficulty
• Prepare for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 7

Choose the correct word or phrase to complete statements about cerebral vascular disorders of the central nervous system.

Description and etiology

Cerebrovascular accident (CVA) – Sometimes referred to as apoplexy or a stroke. The blood supply to the brain is altered, causing a loss of brain function. The damage may be temporary or permanent, resulting in partial or complete loss of memory, movement, speech, or sensation. The extent of injury will depend on the size and location of the blood vessel or vessels affected.

Causes

- Cerebral embolism
- Cerebral hemorrhage or aneurysm

- Cerebral thrombosis
- Generalized or local hypoxia

Health care management

- Treat underlying cause
- Maintain function and prevent complications
- Provide a supportive, calm environment
- Maintain proper body alignment
- Rehabilitation
- Medications: antihypertensives, anticoagulants, stool softeners
- Surgical repair of aneurysm or clot removal

ASSESSMENT **Signs and symptoms**

CVA

- Symptoms vary based on the causative factor; see sections on cerebral embolism, cerebral hemorrhage or aneurysm, and cerebral thrombosis

---

Description and etiology

Transient ischemic attack (TIA) – Sometimes referred to as "little stroke"; characterized by a temporary (up to 24 hours) loss of memory, movement, or sensory function caused by a disruption of blood supply to the brain.

Causes

- Same as CVA

Health care management

- Same as CVA

ASSESSMENT **Signs and symptoms**

TIA

- Symptoms vary based on the causative factor; see sections on cerebral embolism, cerebral hemorrhage or aneurysm, and cerebral thrombosis

---

Description and etiology	**Cerebral embolism** – Occlusion of a blood vessel in the brain. It results in ischemia and destruction of brain cells.
Causes	• Blood clot that breaks off from a thrombus, travels to the brain, and lodges in a blood vessel
Health care management	• Same as CVA
ASSESSMENT	**Signs and symptoms**
Cerebral embolism	• Redness in the face • Noisy breathing • Loss of consciousness • The patient who is not unconscious may show symptoms of inconsistent behavior, memory loss, incontinence, or inability to communicate. • Slow but full and bounding pulse • Elevated blood pressure

---

Description and etiology	**Cerebral hemorrhage or aneurysm** – Rupture of a blood vessel in the brain.
Causes	• Severe hypertension • Congenital abnormality • Arteriosclerosis
Health care management	• Same as CVA
ASSESSMENT	**Signs and symptoms**
Cerebral hemorrhage or aneurysm	• Dizziness and ringing in ears • Violent headache • Nausea and vomiting

Description and etiology

Cerebral thrombosis – A clot forms in place and occludes an artery that supplies a major portion of blood to a vital center in the brain; may be partial or complete

Causes

- Atherosclerosis
- Hypotension

Health care management

- Same as CVA

ASSESSMENT

Signs and symptoms

Cerebral thrombosis

- Signs and symptoms will vary depending on size and location of the lesion.
- Loss of motor function: hemiplegia, paralysis, dysphagia, weakness, contractures
- Loss of communication abilities: speaking, writing, reading, understanding, motor or sensory aphasia
- Loss of half of the visual field
- Loss of gag reflex
- Sensory and/or perception loss
- Impairment in bladder or bowel function
- Unusual emotional responses such as verbal outbursts, anger, crying, depression, anxiety
- Altered level of consciousness
- Change in mental status

Complications

- Coma
- Shock
- IICP

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CEREBRAL VASCULAR DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide suction, as needed • Provide oral care • Encourage bed rest • Elevate head of bed 30-45 degrees • Have patient turn, cough, and deep breathe every 2-4 hours • Provide soft diet appropriate to condition and patient • Provide appropriate means of communication: – Pad and pencil – Call bell • Maintain correct body alignment • Prevent hazards of immobility • Have suction equipment and airway available
• Continually monitor patient's condition	• Monitor vital signs, I/O • Make a neurological assessment every 2 hours • Observe for shock, coma, IICP
• Prepare for patient's discharge	• Prepare teaching plan – Prepare family for patient's emotional lability and possible brain damage – Safety devices – Promote patient independence – Assist with setting realistic goals – Provide literature and information on appropriate national, state, and local agencies or rehabilitation

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 8

Choose the correct word or phrase to complete statements about benign and malignant neoplasms of the central nervous system.

Description and etiology

Brain tumor — A mass of benign or malignant tissue that occupies space in the cranial cavity. Ninety-five percent of brain tumors originate in the brain; the remainder develop from metastases. Gliomas are the most common malignant tumors. They infiltrate into surrounding brain tissue, making removal difficult. Angiomas are benign tumors composed of abnormal blood vessels having thin walls. Patients have a high risk of developing aneurysms. Some angiomas cause serious problems, others remain throughout the patient's life without causing symptoms. Brain tumors cause increased intracranial pressure and may cause death. People between the ages of 55 and 70 years old are at the highest risk.

Causes

- Varies

Health care management

- Supportive care
- Treatment is specific for each individual based on the type of tumor, location, its association with vital structures and the age and condition of the patient
- Surgeries: craniotomy to remove tumor, if possible; usually combined with radiation and chemotherapy
- Complications: coma, shock, IICP

ASSESSMENT

Signs and symptoms

Brain tumor

- Signs of IICP
- Headache
- Dizziness
- Seizures
- Aphasia
- Reduced muscle coordination and weakness
- Fear, anxiety, and personality changes
- Localized neurologic impairment, including loss of motor and sensory function, depending on site of tumor

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care

NEOPLASMS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care, if surgery is indicated • Use hyper/hypothermia blanket if needed • Have patient turn, cough, and deep breathe every 2-4 hours to prevent hazards of immobility and maintain skin integrity • Elevate head of bed 30-45 degrees • Use seizure precautions • Have suction equipment and airway available
• Continually monitor patient's conditions	• Take vital signs; measure in/output
• Prepare for patient's discharge	• Refer family to support groups • Provide literature about neoplasms • Assist with setting realistic goals • Provide literature and information on appropriate national, state, and local agencies for rehabilitation

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 9

Choose the correct word or phrase to complete statements about degenerative diseases of the central nervous system.

Degenerative diseases group I: multiple sclerosis, myasthenia gravis, and amyotrophic lateral sclerosis

Description and etiology

Multiple sclerosis (MS) — An inflammatory disease that causes destruction of the myelin sheath. Because the myelin sheath covers the nerves, white matter of the brain, and spinal cord, transmission of nerve impulses is disrupted. Young adults 20 to 40 years old frequently contract MS.

Causes

- Unknown (genetic predisposition may be involved)

Health care management

- Individualized program to relieve symptoms and supportive care
- Appropriate therapy during exacerbation: range of motion exercises, bed rest, speech therapy, appliances to assist optic defects
- Medications: immunosuppressive agents, ACTH and corticosteroids during acute exacerbations, antispasmodics, antidepressants, antibiotics during urinary infections
- Complications: accidental injury

ASSESSMENT

Signs and symptoms

Multiple sclerosis

- Slow paralysis at first
- Speech and vision disturbances that appear and disappear
- Poor balance and difficulty in walking
- Tremors
- Slurred speech
- Weak and clumsy movements
- Blurred or double vision
- Bowel and bladder incontinence
- Inappropriate emotions such as apathy, euphoria, depression
- Sensory and sexual impairment

Description and etiology

Myasthenia gravis – Weakness of the muscles without atrophy due to nerve impulses that fail to induce normal muscle contractions; usually attacks young adults and middle-aged persons. Some cases are mild and others rapidly fatal. Death is usually due to respiratory failure. The populations most affected are men over 60 and younger women. Myasthenic crisis may occur, a sudden muscular weakness that results in respiratory depression, obstruction of the airway, cerebral hypoxia, and death. Symptoms include respiratory distress and inability to swallow or speak.

Causes

- Unknown

Health care management

- Supportive care
- Medications: Anticholinesterase drugs, immunopharmacologic agents; atropine and antidiarrheal to treat gastrointestinal side effects of anticholinesterase drugs
- Surgeries: Early thymectomy to promote remission; plasmapheresis for patients who do not respond to drug therapy or surgical intervention and are in crises.
- Patient education to coordinate drug program, activities, and prevent weakness or crisis.

ASSESSMENT

Myasthenia gravis

Signs and symptoms

- Weakness in muscles after exercise with return of strength after rest
- Drooping eyelids
- Double vision
- Weak facial muscles that become flabby, causing a sleepy, mask-like expression
- Difficulty in breathing
- Slurred and nasal speech
- Symptoms vary according to the muscles affected

  EXAMPLE: Weakness of laryngeal and pharyngeal muscles resulting in choking, aspiration of food, and difficulty swallowing

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Description and etiology

Amyotrophic lateral sclerosis (ALS, Lou Gehrig's disease) – A degeneration of nerve cells. This progressive disease causes a loss of motor neurons, resulting in flaccid muscles. It affects people in their 50's and 60's, men more often than women. Mental function is not affected. Muscle atrophy progresses for about 3 years until all involuntary movement is affected. The patient usually dies of an infection or pneumonia.

Causes

- Unknown

Health care management

- Supportive care
- Symptomatic treatment
- Stretching exercises
- Therapy to help keep the patient mobile
- Medications: muscle relaxants, quinine therapy, adduction blocks, anticholinesterases
- Complications: accidental injury

ASSESSMENT

Signs and symptoms

ALS

- Fatigue
- Progressive muscle weakness and atrophy in arms, trunk, or legs
- Spasticity
- Brisk, overactive stretch reflexes
- Progressive difficulty with speech and swallowing
- Nasal and unintelligible speech when bulbar muscles are affected
- Possible emotional lability

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

DEGENERATIVE DISEASES I: MS, MYASTHENIA GRAVIS, ALS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer prescribed medications • Encourage physical therapy and exercise • Provide foods that are easy to handle and swallow • Encourage fluid intake and regular eliminations habits
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Prepare for patient's discharge	• Prepare teaching plan – Refer patient and family to resources in the community that may assist patient throughout illness – Instruct patient to avoid emotional upsets and infectious situations – Assist in setting realistic goals – Provide literature and information on appropriate national, state, and local agencies for rehabilitation

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Degenerative diseases group II: Huntington's chorea, Parkinson's disease

Description and etiology

Huntington's chorea – Deterioration of motor control, emotional stability and mental state with reduced intellectual faculties due to inherited organic brain disease. Parents with this disease have a 50% chance of passing it on to their children. Onset occurs between the ages of 35 to 45, with a slow progression for about 20 years until death.

Causes

- Genetic factors

Health care management

- Supportive care for patient and family
- Program of psychological, social, occupational, speech and physical therapies in addition to medical program
- Genetic counseling for patient and family
- Patient and family education for long-range emotional, financial, and legal support and long-term care
- Medications: antipsychotics; antidepressants

ASSESSMENT

Huntington's chorea

Signs and symptoms

- Fidgeting and spasms that appear as muscle jerking; may grow more uncontrollable, becoming a constant writhing and jerking through the entire body as the disease progresses
- Speech is slurred, growing unintelligible as disease progresses
- Increasing difficulty in chewing and swallowing; choking and aspiration of food are likely
- Bladder and bowel incontinence
- Personality changes including irritability, carelessness, loss of memory
- Dementia
- Progressive weakness, leading to severe personality disorders, pneumonia, and eventually death

---

Description and etiology

Parkinson's disease – Weakness and rigidity of the muscles with a slowly spreading tremor in hands and feet. This disease is degenerative and progressive; it attacks persons 50 to 60 years old.

Causes

- Unknown (genetic causes, cerebrovascular disease, viruses, encephalitis, toxicity, and neurochemical imbalance may be factors)

Health care management

- Involves extensive pharmacotherapy
- Supportive care for patient and family

- Stretching and exercise programs to help maintain joint mobility
- Physical therapy to teach compensatory walking techniques
- Speech therapy to improve low-pitched, monotonous, and soft speech patterns
- Patient education for maintaining exercise, bowel routine (for constipation problems), nutritional program, self-care and well-being
- Medications: antihistamines, anticholinergics, tricyclic antidepressants, antiviral agents, levodopa therapy, dopamine agonists, pergolide mesylate

  NOTE: Parkinson's patients should be warned not to take multivitamins or foods high in B_6.

- Surgery: Stereotaxic thalamotomy

  NOTE: Experimental research using fetal tissue implants has been beneficial in treating Parkinson's and Huntington's chorea patients.

ASSESSMENT

Signs and symptoms

Parkinson's disease

- Pill rolling
- Shuffling gait with forward flexion from the waist
- Mask-like face
- Stiffened muscles
- Continuous tremor
- Difficulty in blinking and smiling
- Drooling

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

DEGENERATIVE DISEASES II: HUNTINGTON'S CHOREA, PARKINSON'S DISEASE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer prescribed medications • Encourage physical therapy and exercise • Provide foods that are easy to handle and swallow • Encourage fluid intake and regular elimination habits
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan – Refer patient and family to resources in the community that may assist patient throughout illness – Instruct patient to avoid emotional upsets and infectious situations

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Degenerative disease group III: Alzheimer's disease

Alzheimer's disease – A form of presenile dementia due to atrophy of brain cells. Alzheimer's disease usually attacks people in the sixth decade of life, but it may occur earlier. The disease begins with a vague awareness of forgetfulness and progresses until the patient dies. Positive diagnosis is made by an autopsy.

NOTE: Check current research for information on Alzheimer's Disease.

Causes	• Unknown (genetic factors may be involved)
Health care management	• No known treatment prevents or stops the disease. Medical and behavioral interventions are used to maintain current abilities in an optimal state. • Supportive care for patient and family
ASSESSMENT	**Signs and symptoms**
Alzheimer's disease	• Progressive, irreversible loss of memory • Deterioration of intellectual functioning • Apathy • Speech disturbances • Disorientation • Disordered emotions • Inability to care for self
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

DEGENERATIVE DISEASES III: ALZHEIMER'S DISEASE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote functioning	• Compensate for loss of cognitive function – Speak clearly – Reorient patient repeatedly – Keep items in their places • Provide reorientation programs to keep patient as mentally and physically active as possible • Encourage patient and family members to express normal feelings of anger, grief, frustration

- Prepare for patient's discharge
  - Plan a care program for family to follow while patient is still able to live at home
  - Refer patient and family to resources in the community that may assist them throughout illness
  - Prepare family for abnormal behaviors such as following the caretaker, accusations, aggression, excessive demands, delusions, hallucinations, etc.
  - Encourage primary caregiver to develop a life outside of the relationship; support family's decision to place patient in a care facility

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NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 10

Choose the correct word or phrase to complete statements about miscellaneous disorders of the central nervous system.

Description and etiology

Neuralgia — Severe pain along a nerve course. Neuralgia can can affect any nerve in the body.

Causes

- Pressure on nerve trunk
- Inadequate nerve nutrition
- Toxins in the system

Health care management

- Apply heat or cold to the affected area
- Injection of alcohol or phenol into nerve
- Medications: analgesics
- Surgeries: sectioning of nerve

ASSESSMENT

Signs and symptoms

Neuralgia

- Excruciating pain, felt on the skin, that comes in spasms lasting from two to fifteen seconds

  NOTE: The pain can be caused by a variety of stimuli; even a breeze that touches the trigger area may cause painful spasms

Description and etiology

Tic douloureux (trigeminal neuralgia) — Degeneration of or pressure on the trigeminal (5th cranial) nerve, resulting in severe pain and spasms of facial areas. This condition usually occurs in the older person.

Causes

- Unknown

Health care management

- Injection of alcohol or phenol into nerve
- Medications: antiepileptic drugs
- Surgeries: percutaneous radio-frequency trigeminal gangliolysis, microvascular decompression of the trigeminal nerve

ASSESSMENT

Signs and symptoms

Tic douloureux

- Excruciating pain, felt on the skin, and coming in spasms lasting from two to fifteen seconds; can be most severe in the chin, lips, nose and teeth

  NOTE: The pain can be caused by a variety of stimuli; even a breeze that touches the trigger area may cause painful spasms.

- Persons with tic douloureux try to avoid touching trigger areas and may not touch or wash their faces, shave, chew, or do anything else that might start an attack.

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

NEURALGIA and TIC DOULOUREUX

PLANNING	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and post-operative care if needed • Adapt procedures to avoid causing facial pain: avoid jarring the bed or serving food that is too hot or cold; use cotton ball for washing the face, etc.
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Prepare for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology	**Bell's palsy** – Swelling of the seventh facial nerve resulting in facial paralysis, most often unilateral. In most cases, spontaneous recovery occurs within 3-5 weeks.
Causes	• Unknown (may be due to vascular ischemia, a brain lesion, or viral diseases)
Health care management	• Maintaining muscle facial tone and preventing or minimizing enervation • Electrical stimulation to prevent atrophy • Affected eye may require an eye patch and/or ointment to hold the lid closed at night; if this fails to protect the cornea, the lids are sutured together.

- Medications: steroid therapy, analgesics
- Surgeries: decompression of the facial nerve

ASSESSMENT **Signs and symptoms**

Bell's palsy

- Paralysis of one side of the face
- Drooping of mouth on the affected side
- Uncontrolled salivation or lacrimation
- Painful sensations in the face, behind the ear, and in the eye
- Possible difficulty with speech and eating

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

BELL'S PALSY

PLANNING	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer prescribed medications • Provide pre- and post-operative care if surgery is indicated • Apply heat or cold to affected areas • Massage affected areas • Encourage facial exercises • Apply eye patch and ointment if indicated
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.

	• Contribute to plan of care update.
Description and etiology	**Headache** – Sometimes referred to as *cephalgia*. The patient experiences various degrees, intervals, and intensities of head pain. This condition is usually a symptom of other conditions. The various types are tension, vascular (including migraine), and cluster headaches.
Causes	• Varies
Health care management	• Medications: analgesics
ASSESSMENT	**Signs and symptoms**
Headache	• Pain, varying in location, duration, and severity with the type of headache • May be accompanied by nausea, facial pain, lacrimation, blind spots
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

HEADACHE

PLANNING	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Apply cold or heat to affected area • Administer prescribed analgesics
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Prepare for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 11

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the central nervous system.

Description and etiology

Microcephaly – A congenital anomaly in which the head is abnormally small. The brain may be small or the sutures may have closed prematurely.

Causes

- Defective gene
- Toxic exposure during pregnancy
- Trauma
- Infection
- Metabolic disorders
- Anoxia
- Fetal alcohol syndrome (FAS)

Health care management

- There is no medical treatment for this condition
- Supportive care for child and family
- Habilitative care

ASSESSMENT

Signs and symptoms

Microcephaly

- Head is smaller than the chest circumference
- Responsiveness can range from complete lack of responsiveness or autism to mild hyperkinesis
- May involve varying degrees of motor impairment
- Varying degrees of mental retardation

NOTE: Some children with microcephaly have normal intelligence

Description and etiology

Craniostenosis (craniosynostosis) – Premature closure of the cranial sutures; may result in damage to the eyes and brain. The brain continues to grow, increasing cerebral pressure and causing complications.

Health care management

- Usually there is no treatment other than supportive care for child and parents
- Surgeries: The surgeon can remove long pieces of bone along the fused suture and place a film over the edges to prevent closure. Cosmetic surgery may be desirable to decrease head and facial deformities. Surgery may be needed to relieve cerebral pressure symptoms and treat complications.

ASSESSMENT

Signs and symptoms

Craniostenosis

- Absent fontanels
- Prominence and bony feel of suture line
- Deformities of head, depending on suture lines involved
- Varying degrees of mental retardation
- Convulsions
- Loss of vision

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CRANIAL DEFORMITIES

PLANNING	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer prescribed medications • Provide pre- and post-operative care if surgery is indicated • Support parents and growing child • Demonstrate acceptance of the child repeatedly • Provide continual care and developmental assessment
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for vision problems
• Plan for patient's discharge	• Assist in referring parents to appropriate agencies • Teach parents how to provide support and care for physical, emotional, and social needs

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Hydrocephaly — A condition caused by an imbalance between the production and absorption of cerebrospinal fluid so that there is excessive CFS in the ventricles of the brain. The size of the head and pressure in the brain are increased. The head size can become normal with treatment; without treatment, the child becomes increasingly helpless.

Causes

- Infection
- Trauma
- Tumor

- Perinatal hemorrhage
- Meningomyelocele

Health care management

- Surgical placement of a shunt to divert fluid away from the ventricles. The shunt is changed as the child grows.

NOTE: If sedatives are prescribed for diagnostic or pre-operative procedures, observe child carefully for signs of respiratory depression.

ASSESSMENT

Signs and symptoms

Hydrocephaly

NOTE: Signs and symptoms will vary with the age of the child and the type and duration of the condition.

- Increase in head size
- IICP may develop
- Strabismus
- Shiny scalp/dilated veins
- Lethargy
- Poor muscle tone
- Shrill high-pitched cry
- Irritability
- Vomiting
- Anorexia

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HYDROCEPHALY

PLANNING	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer prescribed medications • Provide pre- and post-operative care • Provide adequate nutrition • Support head fully • Keep patient's weight evenly distributed on a soft surface • Turn patient's head frequently; change position • Provide skin care; observe for pressure sores on head • Provide passive range-of-motion exercises • Hold and cuddle infant • Provide supportive care for parents
• Continually monitor patient's condition	• Observe and take precautions for IICP • Observe for and prevent infection in the shunt area • Observe for dehydration • Observe for excessive fluid drainage • Take vital signs; measure input/output • Measure head circumference daily
• Plan for patient's discharge	• Assist with referrals to appropriate agencies • Instruct parents in the care of the shunt, proper nutrition, symptoms of IICP, and emotional support for child

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology

Myelomeningocele (meningomyelocele) — A form of spina bifida in which a sac-like cyst containing spinal fluid, meninges, a portion of the spinal cord, and/or its nerve roots protrudes through a defective opening in the vertebral column. The hernial protrusion is most commonly found in the lumbar area but can occur at any point on the spinal column, causing a variety of nerve damage and paralysis. A thin, transparent layer of skin covers the cyst. Rupture, leaking, or infection can be life-threatening. Surgery is usually performed immediately, with hydrocephaly developing in 70-80% of cases. Children with myelomeningocele usually experience long-term problems in a variety of areas.

NOTE: A meningocele is a similar disorder, but less severe. The sac-like protrusion contains spinal fluid and possibly meninges. Initial and pre- and post-operative care are the same for both conditions.

Causes

- Unknown

Health care management

- Surgery: laminectomy, removal of sac, and closure of the skin within first few hours after birth
- Cosmetic surgery may be performed
- Oxygen chambers placed over the lesion for infants with infection or unable to undergo surgery
- Supportive care for parents
- Multidisciplinary treatment: orthopedics, urology, physical therapy, and rehabilitation
- Medications: In older children, antibiotics may be prescribed for urinary infections; imipramine hydrochloride and ephedrine sulfate to help retain urine
- Complications — rupture and infection

ASSESSMENT

Signs and symptoms

Myelomeningocele

- Sac-like structure on the spinal column
- Paralysis of body areas below the affected site
- Incontinence of bladder or bowel if nerves are affected
- Joint deformities, such as club foot, depending on degree of nerve involvement
- Flaccidity or spasticity may be present

ANALYSIS | Report findings to RN who will assimilate information for analysis and nursing care.

MYELOMENINGOCELE

PLANNING	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer prescribed medications • Provide pre- and post-operative care • Keep infant on abdomen • Handle child carefully to prevent trauma to sac • Observe for and prevent infection of sac, bladder, and urinary tract • Keep infant dry to prevent irritation and infection • Place a rolled diaper between infant's legs to prevent subluxation • Change patient's position to avoid pressure ulcerations • Place infant in prone position • Hold infant so there is no pressure on the back • Provide normal stimulation; eye contact, physical contact, visual stimulation • Provide skin care • Provide passive range-of-motion exercises • Provide emotional support for family members • Involve parents in care and feeding of infant as soon as possible
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor neurological status
• Plan for patient's discharge	• Assist with referrals to appropriate agencies • Teach parents to feed, hold, change, bathe, and stimulate the infant • Teach care of the incision • Teach methods for proper elimination • Teach safety precautions for a child with decreased sensation in the extremities

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Update care plan.

Description and etiology

Reye's syndrome — A multisystem disease with signs and symptoms that include acute encephalopathy and fatty degeneration of liver and then the brain, kidneys, and heart. It can affect children from 2 months old through adolescence, with the heaviest infection occurring in children between 6 and 11 years old. Reye's syndrome progresses through four stages. A child can reach the last stage shortly after onset. The disease progresses quickly and can be fatal, especially for children under 2 years of age and those with convulsions. The mortality rate is high, with death due to cerebral edema. Possibility of recovery is good with early diagnosis and treatment. For most survivors, recovery is complete and rapid. Brain damage occurs in some patients, but is less common. The disease is increasing in frequency.

Causes

- The specific cause is not known, but Reye's syndrome is usually preceded by a viral disease; aspirin and phenothiazines have been associated with it.

Health care management

- Intensive and constant nursing care
- IV therapy for fluid and electrolyte balance
- Supportive care to family
- Maintenance of open airway
- Observation for IICP
- Strict monitoring and maintenance of I/O
- Reorientation to environment during recovery
- Medications: May include sedatives, muscle relaxants, short-acting barbiturates, osmotic diuretics
- Surgeries: Craniectomy may be required to control IICP

ASSESSMENT

Reye's syndrome

Signs and symptoms

- Fever
- Sore throat
- Malaise

- Persistent vomiting
- Rhinorrhea
- Varying degrees of impaired consciousness
- Irrational behavior, combativeness as disease advances
- Liver dysfunction

Refer to Chapter 61 *Pediatric Nursing Reference* (2nd ed.) by Betz and Poster.

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

REYE'S SYNDROME

PLANNING	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer prescribed medications • Provide tracheostomy care, if needed • Provide pre- and post-operative care if surgery is indicated • Help patient reorient to the environment during recovery • Use seizure precautions • Elevate head of bed • Prevent secondary infections Support parents and child during illness and recovery
• Continually monitor patient's condition	• Monitor vital signs, I/O • Check neurological status hourly (Glasgow Coma Scale) • Monitor body weight • Observe for symptoms of IICP
• Plan for patient's discharge	• Refer parents to supportive organization • Continue support through recovery if complications are present

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Muscular dystrophy – The dystrophies are a group of chronic neuromuscular pediatric conditions in which the muscle fibers gradually degenerate and atrophy, resulting in weakness and wasting of muscles. Most dystrophies are inherited and are defined by the muscle groups affected. Onset is usually between 3 and 5 years of age, but may also occur in adulthood. MD may be accompanied by a range of other difficulties: gastrointestinal dilation, rectal prolapse, fecal impaction; dental and speech problems; cardiomyopathy. The most severe and most common type is Duchenne's (pseudohypertrophic) muscular dystrophy. There is no cure at this time.

Causes

- Genetic

Health care management

- Supportive care for patient and family
- Therapeutic exercise programs
- Appliances to delay contractures of the joints and/or to compensate for muscle weakness
- Genetic counseling for parents

ASSESSMENT

Muscular dystrophy

Signs and symptoms

- Delay in motor development
- Abnormal gait
- Progressive muscle wasting and weakness
- Contractures and deformities of joints
- Gower's sign: when sitting, will use hands to "climb up" legs to a standing position
- Patient may have mental retardation

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

MUSCULAR DYSTROPHY

PLANNING	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Continually monitor patient's condition	• Observe for infection, obesity, and cardiopulmonary problems
• Promote healing	• Provide pre- and post-operative care if surgery is indicated • Maintain function in unaffected muscles for as long as possible • Provide range-of-motion exercises • Encourage movement and mobility • Prepare child and parents for difficult diagnostic procedures • Provide emotional support for child and for the family • Parents of older children with MD may need support for placing child in a care facility
• Plan for patient's discharge	• Teach family to develop self-help skills to keep the child independent as long as possible

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Update care plan.

Description and etiology

Cerebral palsy (CP) – Refers to a group of nonspecific neuromotor disorders caused by nonprogressive developmental defects in the motor centers of the brain. These disorders are the most common causes of permanent disability in children. Disorders are classified by type (spastic, athetotic, and ataxia), distribution of affected muscles (hemiplegia, paraplegia, quadriplegia), and severity. The majority of children with CP have continuous muscle spasms and contractures (spastic) or constant motion and slow muscle contractions (athetotic). Intelligence is usually normal, but mental retardation may occur. Speech, sight, and hearing may be defective; the patient may have convulsions and severe emotional problems.

Causes

- Cerebral palsy can be caused by many factors, including, but not limited to:
  - Birth injuries
  - Neonatal anoxia
  - Subdural hemorrhage
  - Rh incompatibilities
  - Encephalitis
  - Meningitis

NOTE: Although CP is primarily a children's disease, some adults may be afflicted.

Health care management

- Supportive care and therapy aimed at normalization, to help each child become a happy, well-adjusted adult, able to function at optimal levels for his/her capabilities
- Physical therapy for muscle control
- Braces for mechanical support and to hold arms and legs in correct functioning positions
- Appliances as needed for ambulation, such as walkers, wheelchairs, crutches
- Extensive emotional support for child and family
- Medications: anticonvulsants for seizures

  NOTE: Spasticity and involuntary movements are not affected by medication.

- Surgeries: orthopedic surgery may be indicated
- Complications: accidental injury

ASSESSMENT — **Signs and symptoms**

Cerebral palsy

- Delay in gross motor development
- Exaggerated arching of the back
- Spastic movements
- Abnormalities in reflex responses
- Contracted muscles or uncontrolled movement, depending on type of palsy

ANALYSIS — Report findings to RN who will assimilate information for analysis and nursing care.

CEREBRAL PALSY

PLANNING	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote comfort and normal function	• Provide for physical care needs: feeding, grooming, exercise, rest, safety; allow children to do as much as possible for themselves • Provide a variety of play situations • Help child achieve normal developmental levels and activities • Support parents in initial coping and in preparing for long-term adjustment • Provide emotional support for the parents
• Prepare for patient's discharge	• Assist in referring parents to appropriate agencies • Teach parents how to care for child's physical needs • Help parents set realistic short-term and long-term goals • Teach parents to provide for child's safety

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Update care plan.

Description and etiology

Narcotic abstinence syndrome (NAS) – The condition of a child born to a narcotic-addicted mother. The newborn will be addicted to narcotics that have crossed the placenta and will demonstrate withdrawal signs within 24 hours. Babies are placed on a withdrawal program until they are free of symptoms and no longer require medications. Treatment time may be 2 weeks or up to 4 months. If the mother used intravenous drugs, the child may be HIV-positive. Research indicates that these children have learning and behavioral disorders.

NOTE: Universal precautions are indicated during delivery of a narcotic-addicted mother.

Causes

- Exposure to drugs in utero

Health care management

- Administration of narcotics in decreasing amounts until withdrawal is complete
- Decrease irritability with swaddling
- Assessment every 4 hours with the Neonatal Abstinence Scoring Tool

ASSESSMENT

Signs and symptoms

NAS

- Hyperreflexia
- Hypertonia
- High-pitched cry
- Mottled coloring
- Nasal congestion
- Profuse perspiration
- Sneezing
- Tremors

- Yawning
- Eating behavior is poor

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

NARCOTIC ABSTINENCE SYNDROME (NAS)

PLANNING	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer prescribed medications • Keep infant warm • Wrap infant in swaddling • Hold infant
• Continually monitor patient's condition	• Monitor vital signs, I/O • Assess every 4 hours
• Plan for patient's discharge	• Teach parents how to care for child's special needs; teach basic infant care, if needed

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 12 **Describe treatment adaptations for children with subdural hematoma and bacterial meningitis.**

NOTE: Review Objectives 5 and 6.

In pediatric nursing, both parents and the patient require a great deal of supportive care. Your plan of care will include teaching the parents to care for the child's needs, recognize complications and posttraumatic symptoms, and prepare for long-range care. Plan activities and encourage play.

- **Subdural hematoma** – Newborns are placed in an incubator, with head elevated, and are handled gently and as little as possible. Infants should be held and cuddled as much as possible. Provide side rail padding for restless children.
- **Bacterial meningitis** — Requires isolation for a minimum of 24 hours after antibiotic therapy begins. Newborns may be placed in incubators with oxygen support and infants or children may be placed in oxygen tents. Children are usually given nothing by mouth or, if they can eat, are given a clear liquid diet that progresses to a normal diet for their ages. Provide sucking stimulation for infants on nasogastric or gavage feeding.

Prolonged intravenous therapy may require restraints and children should be released from these as much as possible.

DIAGNOSTIC PROCEDURES

Brain scan — used to document any brain lesions or disease areas by using radioactive isotopes picked up by a scanner as they pass through brain

Cerebral arteriogram — used to visualize cranial arteries following an injection of a radiopaque substance into carotid artery

Cisternal puncture — used to withdraw cerebrospinal fluid for laboratory examination by inserting a hollow needle between the cervical vertebrae, through the dura mater at the base of the brain

Computerized tomography (CAT or CT scan) — used to visualize cranial area. A scintillator picks up rays and transmits them through a computer to a television screen or photographic plate

Echoencephalogram — used to record echoes from deep structures within the skull by transmitting ultrasound waves to a scope

Electroencephalogram (EEG) — used to amplify, record, and analyze electrical activity of the brain by applying electrodes to the scalp surface

Electromyogram (EMG) — used to amplify, record, and analyze electrical changes and the potential of nerves leading to the muscles by inserting needle electrodes into skeletal muscles

Lumbar puncture — used to withdraw cerebrospinal fluid for laboratory examination by inserting a hollow needle into the arachnoid space between the third and fourth lumbar vertebrae

Magnetic resonance imaging (MRI) — used to visualize soft tissues in color. The combination of a magnetic field and radio waves produces a computerized picture.

Myelogram — used to visualize spinal cord after replacement of spinal fluid with air or with a radiopaque dye during a lumbar puncture

Neurological examination — used as overall assessment of body's ability to perform certain motor and sensory functions. This examination assesses reflexes, ability to sense pain and the dullness or sharpness of objects, and the ability to coordinate eye and hand movements

Pneumoencephalogram — used to visualize the cranial area after replacement of part of cerebrospinal fluid with air

Skull x-ray — used to visualize configuration, density, and vascular marking of the skull and brain, and to visualize intracranial calcification and tumors through radiography

Ventriculogram — used to visualize spaces within the brain following the injection of air into the ventricles. This procedure is usually performed in surgery, using a local anesthetic

SURGICAL PROCEDURES

Carotid endarterectomy — removing plaque or a thrombus from the carotid artery to prevent a stroke or to relieve the symptoms

Cordotomy — dividing and cutting the nerve fibers within the spinal cord to relieve chronic pain

Craniectomy – removing a section of the skull and the dura to relieve pressure; the section of skull is not replaced; used when pressure is extremely high

Cranioplasty – repairing a cranial defect with a plastic or metal plate

Craniotomy – opening of a section of the skull and the dura, removing the blood and possibly the membrane, and replacing the section of skull

Diskectomy – removal of all or part of a herniated disk

Foraminotomy – widening the intervertebral foramen to create more space for the spinal nerve

Laminectomy – removing part or all of the bony arches of the vertebrae that surround the spinal cord to relieve pressure on the cord

Microvascular decompression of the trigeminal nerve – inserting a small prosthetic device between the artery loop and the nerve to relieve pressure on the nerve; performed in a retromastoid craniectomy using an operating microscope

Plasmapheresis – removal of the plasma containing the acetylcholine receptor antibodies; for patients who don't respond to drug therapy or surgical intervention and are in crisis

Percutaneous radio-frequency trigeminal gangliolysis – thermally destroys the small, unmyelinated and thinly myelinated fibers that conduct pain

Rhizotomy — cutting a section of the nerve root to relieve chronic pain

Spinal fusion — fusing the bony vertebrae to stabilize the spine after the disc has been removed

Stereotaxic thalamotomy – using guiding instruments and rapid x-rays to locate the precise position of a small area on the thalamus, placing an electrode or freezing probe in the target area, then creating a lesion that relieves certain types of extreme muscle contraction

Sympathectomy — cutting the sympathetic nerve to interrupt the nerve pathway. It improves blood supply or relieves chronic pain.

Thymectomy – removal of the thymus gland

ASSIGNMENT SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE CENTRAL NERVOUS SYSTEM

III

Name ______________________________ Score ________

OBJECTIVE 13

Plan care for patients with diseases and disorders of the central nervous system.

INTRODUCTION

Patients who have a herniated disc are frightened and in pain. If the initial treatment does not relieve the disorder, they will ultimately need surgery to correct the problem. Treatment begins with conservative care involving bed rest, pelvic traction, and analgesics to eliminate pain. Physical therapy treatments of heat and massage aid in comfort and recovery. Because of prolonged inactivity, patients often develop constipation. The nurse will need to monitor bowel elimination, along with bladder function, and adequate nutrition and fluids. Patients are treated symptomatically; and nurses should be able to give informed advice and supportive care. Teaching is another important element in the nurse's responsibility.

DIRECTIONS

In this assignment you are given a case study of a hypothetical patient. Plan care for a patient in your clinical practice or use these case studies. Care plans are essentially research projects for each of your patients. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Use the information in Objectives 3 and 5 to complete a plan of care for your patient. Your instructor will provide a care plan form for your use.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

SCENARIO 1

Ms. Fowley is a 52-year-old nurse who was admitted into the hospital with back pain radiating down her buttocks. She was unable to move after helping one of her patients back to bed. X-rays reveal she has a herniated disc. After careful examination, she is admitted to the third floor for conservative back care. She is scheduled for a myelogram tomorrow. Although she is familiar with medical procedures, she is scared, and wants you to explain the procedure.

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

SCENARIO 2

Mr. Stinson is a 25-year-old construction worker. He fell from a scaffold and fractured his skull. He was admitted as a neurology patient and observed for IICP. He developed early symptoms of vomiting, headache, and slowed pupillary response with dilation. He is experiencing pain and is worried about losing time off from work and about how seriously he is injured.

SCENARIO 3

Madelyn McPherson is an 8-year-old who was admitted with a spinal cord injury following a diving accident. She was rushed to the hospital within 20 minutes of the accident and diagnosed with spinal cord trauma. Her symptoms include paralysis, anesthesia, and loss of muscle tone, indicating spinal shock.

SCENARIO 4

Mrs. Bennett is a 70-year-old nursing home resident. This morning, the aide who was helping her dress told you that Mrs. Bennet had more difficulty than usual and seemed to be unable to move her left arm. You went to her room and asked her how she felt, but she simply stared at you and began to cry.

ASSIGNMENT SHEET

Care plans should meet the following criteria:

- Nursing process followed
  - Assessment
  - Analysis (under direction of RN)
  - Planning
  - Implementation
  - Outcome/evaluation (under direction of RN)
- Problem stated appropriately
- Nursing actions/interventions include discharge planning

APPLY THE NURSING PROCESS TO THE CARE OF THE CENTRAL NERVOUS SYSTEM

Name ________________________________ Score ________

OBJECTIVE 14 **Perform a neurocheck on a patient.**

INTRODUCTION The nurse monitors patients for level of consciousness, pupillary activity, motor performance, and sensory function. Ongoing surveillance is essential for patients who are at risk for CNS deterioration due to brain trauma.

The Glasgow Coma Scale

A neurocheck list is used to assess and monitor patients who may have brain injury. The Glasgow coma scale furnishes a criterion for the medical team to use while confirming the extent of a brain injury. Three types of responses are measured: eye aperture, verbal responses, and motor reactions. A number is assigned to each reply. After a complete assessment, the nurse adds the numbers. The lowest possible score is 3, the highest is 15. A score of 7 or below indicates a coma. This scale is helpful to those who work in emergency rooms or intensive care units.

When the nurse measures	The possible responses are
Eye opening response	Spontaneously To speech To pain No response
Best verbal response	Oriented x 3 Confused conversation Inappropriate words Incomprehensible sounds No response
Best motor response	Obeys verbal commands Localize pain Flexor Flexion to pain Extension to pain No response

EQUIPMENT AND SUPPLIES

- Flashlight
- Sphygmomanometer
- Stethoscope
- Thermometer
- Percussion hammer

PROCEDURE

Assessment and analysis	Yes	No
1. Identify patient.		
2. Observe patient's condition, chart any changes.		
Planning		
1. Check patient's chart.		
2. Reassure patient and explain procedure.		
3. Prepare for procedure.		
Implementation		
NOTE: Observe universal precautions		
1. Collect equipment.		
2. Explain procedure to the patient as steps are performed.		
3. Wash your hands.		
4. Observe the patient's general appearance.		
a. Color of the lips and fingernails		
b. Level of activity		
c. Rhythm and rate of respirations		
5. Assess the patient's response to verbal stimuli.		
a. Responds to normal voice range or requires loud verbal stimuli.		

Reading Comprehension
- Gain factual information

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization

Functional Writing
- Complete forms and records

Operation and Calculation
- Calculate with whole numbers

Life Science
- Investigate health issues

Interactive Communications
- Give/follow oral directions
- Analyze/apply non-verbal communication
- Communicate with clients/customers/ patients

Cognitive Activities

- Collect/record information
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
b. Answers appropriately or appears confused.	____	____
c. Responds to command.	____	____
d. Gives no response.	____	____
6. Assess patient's muscle tone and function.		
a. Hand grips	____	____
b. Leg strength	____	____
c. Hold hand out to determine tremor.	____	____
7. Assess patient's level of consciousness and orientation to place, time, and person.	____	____
8. Check reaction of pupils with a flashlight; both pupils should normally contract equally.	____	____
NOTE: If one pupil contracts more than the other, record and report result.		
9. Check patient's vital signs.	____	____
10. Compare assessment with previous observations to determine if patient's condition is stable, improved, or deteriorated.	____	____
11. Clean up:		
a. Put usable equipment away properly.	____	____
b. Dispose of unusable equipment properly.	____	____
c. Wash your hands.	____	____
12. Document procedure according to agency requirements.	____	____

Evaluation	Yes	No
13. Recheck patient according to physician's orders or facility policy to determine condition.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Used proper equipment correctly	4	3	2	1
Performed assessment in a systematic manner	4	3	2	1
Put away equipment and cleared work area	4	3	2	1
Used universal precautions	4	3	2	1

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" on the following page.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
1 **Unskilled** – Is familiar with process, but is unable to perform job

JOB SHEET 2 — APPLY THE NURSING PROCESS TO THE CARE OF THE CENTRAL NERVOUS SYSTEM — III

Name ______________________________ Score ________

OBJECTIVE 15 **Assist with a lumbar puncture.**

INTRODUCTION

The physician inserts a sterile needle between the third and fourth lumbar vertebrae and aspirates a small amount of cerebral spinal fluid. This procedure is done to determine the cause of IICP or other CNS disorders. The specimen is sent to the lab for analysis.

EQUIPMENT AND SUPPLIES

- Sterile gloves
- Lumbar tray
- Signed informed consent form (verified in chart)

PROCEDURE

	Yes	No
Assessment and analysis		
1. Identify patient.	_____	_____
2. Observe patient's condition; note any changes.	_____	_____
Planning		
1. Check patient's chart.	_____	_____
2. Reassure patient and explain procedure.	_____	_____
3. Prepare for procedure.	_____	_____
Implementation		
NOTE: Observe universal precautions.		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient as steps are performed.	_____	_____
3. Wash your hands.	_____	_____
4. Place patient in lateral position with the lower back at the edge of the bed.	_____	_____

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Interactive Communications
- Communicate with clients/customers/patients
- Communicate with professional colleagues/associates

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Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
5. Have patient draw knees toward the chin to arch back outward.	____	____
6. Position sterile equipment conveniently for the physician.	____	____
7. Assist patient as needed to maintain position during the procedure.	____	____
8. Assist the physician as needed.	____	____
9. Assist patient to comfortable position after the procedure.	____	____
10. Replace the top covers.	____	____
11. Label and send specimen to lab *immediately*.	____	____
12. Clean up:		
a. Put usable equipment away properly.	____	____
b. Dispose of unusable equipment properly.	____	____
c. Wash your hands.	____	____
13. Document procedure according to agency requirements.	____	____
Evaluation		
14. Recheck patient in 15 to 30 minutes or according to agency procedures to check for comfort and reassess puncture site and neurological status.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Assisted with lumbar puncture	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed assessment in a systematic manner	4	3	2	1
Used universal precautions	4	3	2	1

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" on the following page.

PERFORMANCE EVALUATION KEY

4 **Skilled** — Can perform job with no additional training

3 **Moderately Skilled** — Has performed job during training program; limited additional training may be required

2 **Limited Skill** — Has performed job during training program; additional training is required to develop skill

1 **Unskilled** — Is familiar with process, but is unable to perform job

JOB SHEET 3 APPLY THE NURSING PROCESS TO THE CARE OF THE CENTRAL NERVOUS SYSTEM III

Name ______________________________ Score ________

OBJECTIVE 16 **Care for a patient with a neurological deficit.**

INTRODUCTION

In a cerebral vascular accident (CVA) brain tissue is deprived of blood, which results in ischemia. An altered blood supply from cerebral embolism, thrombus, stenosis of an artery, and cerebral hemorrhage may cause the ischemia and result in loss of function. The site and size of damage determines the extent and location of loss. The patient can be partially or totally impaired and may or may not regain total body use.

EQUIPMENT AND SUPPLIES

- Pen
- Work sheet
- Patient care items as needed

PROCEDURE

Assessment and analysis	Yes	No
1. Identify patient.	_____	_____
2. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Check patient's chart.	_____	_____
2. Reassure patient and explain procedure.	_____	_____
3. Prepare for procedure.	_____	_____
Implementation		
NOTE: Observe universal precautions.		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient as steps are performed.	_____	_____

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Interactive Communications
- Communicate with clients/customers/patients
- Communicate with professional colleagues/associates

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
3. Wash your hands.	____	____
4. Skin care:		
a. Turn patient frequently to prevent pressure on bony prominences that may lead to decubitus ulcers.	____	____
b. Use a lotion when massaging skin.	____	____
c. Pad beds or wheelchairs with products that support but do not irritate the skin.	____	____
5. Eye care:		
a. Use prescribed solutions instilled in eyes of patients who cannot blink.	____	____
b. Check eyes frequently to detect signs of irritation or ulceration of cornea.	____	____
c. Apply eye patches if ordered.	____	____
6. Mouth care:		
a. Give oral care several times a day to moisten mouth and remove old secretions.	____	____
b. Take care not to use excess fluids that might be aspirated by the unconscious patient.	____	____
7. Bladder and bowel care:		
a. Maintain catheter care until patient can be retrained.	____	____

NOTE: Patients may be able to regain some control of bladder in the rehabilitation stage of the illness.

	Yes	No
b. Provide diet high in bulk, and provide large quantities of liquids to prevent constipation and encourage regular bowel movements.		
c. Establish regular routine for elimination.		
d. Use suppositories and enemas as needed to stimulate bowel movements.		
8. Muscular care:		
a. Provide passive range-of-motion exercises until patient is able to move without assistance.		
b. Position patient in good body alignment using sandbags, pillows, bedboards, and footboards.		
9. Dietary care:		
a. Provide a well-balanced diet high in protein with an increased intake of fluids.		
b. Give additional vitamin supplements as needed.		
c. Feed semiliquid or liquid diet very slowly to the semiconscious patient.		
10. Sensory and emotional care:		
a. Assist patient to communicate, using method adapted to patient's limitations.		
b. Encourage aphasic patient to speak as soon as speech therapy can begin.		

Yes No

c. Reassure patient when personality changes occur and emotional reactions are inappropriate. _____ _____

d. Accept patient's behavior, and allow patient and family to express feelings. _____ _____

e. Provide diversional activities that will occupy time and assist in rehabilitation process. _____ _____

11. Clean up:

a. Put usable equipment away properly. _____ _____

b. Dispose of unusable equipment properly. _____ _____

c. Wash your hands. _____ _____

Evaluation

12. Reassess patient's condition according to facility policy. _____ _____

Documentation

13. Document procedure according to agency requirements. _____ _____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS ______________________________

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Cared for patient with a neurological deficit	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed assessment in a systematic manner	4	3	2	1
Used universal precautions	4	3	2	1

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
1 **Unskilled** – Is familiar with process, but is unable to perform job

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE CENTRAL NERVOUS SYSTEM

III

Name ____________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the (CNS) central nervous system to their correct definitions. Write the correct letter in the blank.

Part 1

____ 1. A variety of symptoms resulting from disorganized electrical activity in the brain

____ 2. Insufficient blood supply to tissues; may be temporary or permanent

____ 3. Weakening of a vessel wall resulting in a localized area that is dilated and may resemble a balloon or pouch

____ 4. A congenital disorder in which there is insufficient closure of the vertebral column

____ 5. Difficulty in speech communication; not being able to say what one wishes to say

____ 6. Recurring seizures caused by neurological disorders of the brain

____ 7. Crossed or crooked eyes

____ 8. Lower than normal urine output

____ 9. Feeling or sensation that precedes a migraine headache or epileptic seizure

a. aneurysm

b. aphasia

c. aura

d. dysphagia

e. dysphasia

f. epilepsy

g. hemiplegia

h. ischemia

i. lethargy

j. oliguria

k. seizure

l. spina bifida

m. spondylosyndesis

n. strabismus

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Part 2

_____ 1. Paralysis of one side of the body caused by damage on the opposite side of the brain

_____ 2. Absence or impairment of the ability to communicate through speech and writing due to dysfunction of brain center

_____ 3. Small purplish or bluish spots on the skin

_____ 4. Tingling, prickling, or numbness

_____ 5. The period immediately following a seizure

_____ 6. Paralysis of both legs; the trunk may also be paralyzed

_____ 7. Sluggish or slow patient response

_____ 8. Paralysis of all four limbs and the trunk

_____ 9. Alternating muscular contraction and relaxation

_____ 10. Muscular contraction

a. aphasia
b. clonic
c. hemiplegia
d. ischemia
e. lethargy
f. paralysis
g. paraplegia
h. paresthesia
i. petechiae
j. postictal stage
k. quadriplegia
l. seizures
m. spina bifida
n. spondylosyndesis
o. tonic

OBJECTIVE 2

Choose the correct word or phrase to complete statements about components of a basic neurological assessment. Write the correct letter in the blank.

_____ 1. Assessment of level of consciousness includes all the following EXCEPT

a. tactile sensation
b. level of responsiveness
c. ability to speak
d. orientation

May be photocopied for student use

_____ 2. Assessment of motor function includes all the following EXCEPT

   a. ability to grasp objects
   b. move the lower extremities
   c. coordination, posture, and reflexes
   d. oliguria, incontinence

_____ 3. Assessment must include noting sensory function, orientation, motor function

   a. pupillary function and vital signs
   b. respiratory and renal functions
   c. immune and pupillary functions
   d. endocrine function and vital signs

_____ 4. The size and site of tissue damage are related to the loss of body function

   a. indirectly
   b. directly
   c. inversely
   d. intermittently

_____ 5. Assessing sensory performance includes all the following EXCEPT

   a. tactile sensation
   b. superficial pain
   c. intelligence
   d. visual disturbances

_____ 6. In assessing orientation, the nurse asks the patient to

   a. squeeze the nurse's hand
   b. state today's date
   c. follow the movement of a pen with her eyes
   d. identify pictures of various objects

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OBJECTIVE 3

Choose the correct word or phrase to complete statements about increased intracranial pressure (IICP). Write the correct letter in the blank.

_____ 1. A patient who fell from a ladder is waiting for emergency treatment. You immediately notify the doctor that you suspect increased intracranial pressure when

a. the patient becomes hypertensive and his pupils constrict
b. one side of his body jerks
c. his pulse is 92
d. his diastolic pressure increases

_____ 2. Changes in vital signs include

a. hypothermia
b. hypotension
c. widening pulse pressure
d. falling systolic pressure

_____ 3. Change in vision from IICP can result in all the following EXCEPT

a. pupillary changes
b. unilateral dilation
c. fixed or dilated pupils
d. rapid reaction to light

_____ 4. Cushing's triad is

a. ↓ pulse, ↑ blood pressure, ↓ respiration
b. ↑ respiration, ↑ blood pressure, ↓ pulse
c. ↓ temperature, ↑ pulse, ↓ respiration
d. ↓ respiration, ↑ temperature, ↓ pulse

_____ 5. Nursing implementation for IICP includes

a. use hypothermia blanket
b. provide pre- and postoperative care
c. assist with diagnostic treatments
d. encourage activity

_____ 6. Early symptoms of IICP are

a. coughing, vomiting, seizures
b. vomiting, change in pupils, headache
c. change in pupils, headache, hypertension
d. lack of orientation, lethargy, vomiting

May be photocopied for student use

For questions 7-12, refer to the following scenario:
Ruby White is 48 years old, she was admitted into the hospital with a diagnosis of IICP. She appears to be confused.

_____ 7. In your neurological assessment, you would check for a change in vital signs and all the following EXCEPT

a. vision
b. gastrointestinal function
c. motor control
d. level of consciousness

_____ 8. The symptoms you observe are

a. weakness, restlessness, widening pulse pressure
b. aura, rigid body, clenched jaw
c. dizziness, confusion, aphasia
d. pain from spasms, tremors, absent gag reflex

_____ 9. Ruby is MOST LIKELY

a. exhibiting early symptoms
b. a candidate for craniectomy
c. exhibiting late symptoms and is in serious condition
d. to experience seizure activity

_____ 10. The medications the doctor might prescribe for Ruby include steroids, barbiturates, diuretics, stool softeners, and

a. anticoagulants
b. anticonvulsants
c. antipyretics
d. antihypertensives

_____ 11. You would monitor vital signs and do a neurological assessment on Ruby every

a. 30 minutes
b. 4 hours
c. 2 hours
d. 15 minutes

_____ 12. The plan of care for Ruby would include

a. turn, cough, and deep breathe every 4 hours
b. provide a soft diet
c. encourage activity
d. elevate the head of the bed

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OBJECTIVE 4 **Choose the correct word or phrase to complete statements about seizures.** Write the correct letter in the blank.

_____ 1. If a seizure affects predominantly one side of the body, it is a

a. unilateral seizure
b. partial seizure
c. myoclonic seizure
d. unitonic seizure

_____ 2. The treatment for seizures includes providing a quiet environment, administering anticonvulsants, and

a. protecting the patient from injury or harm
b. administering steroids
c. placing the patient in a dark room
d. using restraints

_____ 3. Jason Bartelow has had a seizure characterized by intense fear and inappropriate, automatic movement. When the seizure was over, he had no awareness that it had occurred. He probably had a

a. partial elementary seizure
b. partial complex seizure
c. myoclonic seizure
d. tonic-clonic seizure

_____ 4. Epilepsies are characterized by

a. onset at 30-40 years of age
b. tonic-clonic seizures
c. loss of consciousness
d. recurrent seizures

_____ 5. Tonic-clonic [grand mal] seizures begin with

a. an aura
b. a cry
c. complete muscle relaxation
d. complete muscular rigidity

May be photocopied for student use

_____ 6. A dangerous condition characterized by repeated seizures without the patient regaining consciousness in between is

a. bilateral massive myoclonus
b. tonic-clonic seizures
c. generalized seizures
d. status epilepticus

_____ 7. You are reading to Maggie, an 8-year-old with epilepsy, when all expression leaves her face. Her eyes focus straight ahead and she is still, except for a slight twitching of her eyelids. Maggie is having generalized seizure, classified as

a. absence
b. clonic
c. complex
d. tonic

_____ 8. Bilateral massive myoclonus is characterized by rapid, rhythmic muscle jerks, and

a. a cry
b. loss of consciousness
c. no loss of consciousness
d. cyanosis

_____ 9. The type of seizure with no impairment of consciousness is

a. partial elementary
b. partial complex
c. generalized
d. absences

_____ 10. Causes of seizures include genetic defects, nutritional deficiencies, toxic conditions, head injuries, and

a. sleep disorders
b. lack of exercise
c. fever
d. hyperoxemia

May be photocopied for student use.

_____ 11. A person who speaks nonsense and experiences dizziness, unusual odors accompanied by focal motor or sensory convulsions, is having a

a. clonic seizure
b. tonic seizure
c. partial elementary seizure
d. partial complex seizure

For questions 12-15, refer to the following scenario:
Wade Black is 25 years old, and was admitted into the hospital with a diagnosis of tonic-clonic seizure activity.

_____ 12. Wade's symptoms will MOST LIKELY include aura, jerky muscular spasms, and

a. anxiety
b. aphasia
c. incontinence
d. pain from spasms

_____ 13. When you administer Wade's medications, you would give him

a. anticoagulants
b. antipyretics
c. antihypertensives
d. anticonvulsants

_____ 14. Another nurse is present during a seizure. She recorded the time of onset, his level of consciousness, his condition after the seizure, and the time the seizure stopped. She failed to note

a. his vital signs
b. the number of contractions
c. the specific body parts involved
d. inadequate breathing

_____ 15. To prevent complications, you have an airway and suction available and

a. observe for shock
b. instruct him to take medication properly
c. elevate the head of the bed
d. encourage bed rest

May be photocopied for student use

OBJECTIVE 5

Choose the correct word or phrase to complete statements about trauma to the central nervous system. Write the correct letter in the blank.

____ 1. If Lillian, 68, is having a laminectomy, she probably has a

a. herniated disc
b. spinal cord injury
c. fractured skull
d. subdural hematoma

____ 2. Aphasia could be an indication of

a. spinal cord trauma
b. spinal nerve compression
c. hematoma
d. concussion

____ 3. Autonomic dysreflexia or hyperreflexia, a medical emergency that can lead to CVA, blindness or death, can result from injuries with lesions above which thoracic vertebrae?

a. 4th
b. 6th
c. 8th
d. 10th

____ 4. An injury with profuse bleeding, requiring possible treatment for shock and observation for possible hematoma and IICP, is MOST LIKELY a

a. herniated disc
b. scalp injury
c. concussion
d. transection of the cord

____ 5. Multiple burr holes or craniotomy may be performed on a patient with

a. a skull fracture
b. an epidural hematoma
c. a subdural hematoma
d. an intracerebral hematoma

May be photocopied for student use.

_____ 6. The common surgical procedure for skull fracture is

- a. craniotomy
- b. craniectomy
- c. cranioplasty
- d. foraminotomy

_____ 7. Herniated discs are caused by

- a. toxins, infections
- b. vascular insufficiency, hematoma
- c. degeneration, tumors, trauma
- d. tumors, infections

_____ 8. If discs that cushion vertebral bones protrude, the nerves compress, causing all the following EXCEPT

- a. loss of consciousness
- b. pain
- c. sensory loss
- d. muscle weakness

_____ 9. Immediate and temporary impairment of neurologic function caused by a blow to the head is the definition of a

- a. contusion
- b. concussion
- c. scalp injury
- d. transection of the cord

_____ 10. Margaret, a 54-year-old secretary, complains of stiffness and pain in her neck and across her shoulder. She has frequent headaches and tingling and numbness in her hands. The MOST LIKELY cause is

- a. spinal cord trauma
- b. concussion
- c. contusion
- d. cervical compression

_____ 11. Medications for skull fractures include

- a. anticonvulsants and antibiotics
- b. antibiotics and diuretics
- c. diuretics and antiemetics
- d. anticonvulsants and diuretics

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_____ 12. All of the following are symptoms of spinal cord trauma EXCEPT

a. inadequate breathing
b. distended bladder or impacted rectum
c. muscular weakness, numbness, tingling, burning
d. high blood pressure

_____ 13. The medications used to treat spinal cord trauma include antispasmodics, anti-inflammatories, osmotic agents (mannitol), and

a. steroids
b. anticoagulants
c. barbiturates
d. muscle relaxants

_____ 14. Preventing degeneration and permanent or total damage to the spinal cord after injury is possible for up to

a. 3-4 hours
b. 5-6 hours
c. 4-6 hours
d. 2-4 hours

_____ 15. Paralysis and aphasia may occur with

a. hematomas
b. skull fractures
c. contusions
d. herniated cervical discs

_____ 16. Pain from lumbar compression is aggravated by

a. turning the head
b. lying down
c. sneezing and coughing
d. all movement

_____ 17. If a patient shows symptoms of loss of consciousness, feeble pulse, shallow respiration, and cold, pale skin; visual impairment and neurologic alterations, he PROBABLY has a

a. concussion
b. contusion
c. skull fracture
d. scalp injury

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_____ 18. Rest, heat and traction are standard treatments for

a. skull fractures
b. contusions
c. herniated discs
d. meningitis

_____ 19. Surgeries for spinal cord trauma include laminectomy, investigative surgery and

a. foraminotomy
b. spinal fusion
c. debridement
d. cordotomy

_____ 20. The symptoms of skull fracture include pressure on the affected brain site and varying levels of IICP if a bone fragment presses inward. If the fracture is open, there will also be

a. hypoxia
b. amnesia
c. leaking of CSF fluid
d. spinal shock

_____ 21. The type of hematoma that is considered an extreme emergency is

a. scalp injury
b. epidural
c. subdural
d. intracerebral

OBJECTIVE 6

Choose the correct word or phrase to complete statements about infectious diseases of the central nervous system. Write the correct letter in the blank.

_____ 1. The symptoms of adult botulism include all of the following EXCEPT

a. acute gastrointestinal cramping
b. progressive respiratory paralysis
c. diplopia
d. diaphoresis

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_____ 2. Antibiotics may be injected directly into the spinal canal to treat

a. encephalitis
b. tetanus
c. Guillain-Barre syndrome
d. meningitis

_____ 3. All of the following are symptoms of meningitis EXCEPT

a. resistance to neck flexion
b. nausea and vomiting
c. apnea
d. petechiae

_____ 4. For encephalitis

a. treatment involves IV antitoxin therapy
b. treatment may require a tracheotomy
c. treatment includes pre- and post-operative care
d. there is no specific medical treatment

_____ 5. The symptoms of Guillain-Barre syndrome include a varying degree of muscle weakness to paralysis, apnea due to muscle weakness, and

a. high fever
b. paresthesia of extremities
c. nausea and vomiting
d. stiffness in the neck

_____ 6. A central nervous system infection carried by saliva is

a. rabies
b. tetanus
c. botulism
d. Guillain-Barre syndrome

_____ 7. An infectious disease that can be prevented by immunization is

a. meningitis
b. tetanus
c. botulism
d. Guillain-Barre syndrome

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_____ 8. Children with ear infections are susceptible to

a. Guillain-Barre syndrome
b. botulism
c. encephalitis
d. meningitis

_____ 9. General malaise, fever, sore throat, periods of excitability followed by convulsions, choking spasms, and maniacal behavior are the symptoms of

a. tetanus
b. cerebral aneurysm
c. rabies
d. Reye's syndrome

_____ 10. An infection from gram-positive bacteria that grow at the site of an injury is

a. rabies
b. tetanus
c. botulism
d. Guillain-Barre syndrome

_____ 11. Symptoms of infant botulism include lethargy, poor feeding, general weakness, and

a. diarrhea
b. constipation
c. periods of excitability
d. low-grade fever

_____ 12. Rigidity of abdominal and limb muscles, rapid pulse, progressive stiffness accompanied by diaphoresis, and tenderness in neck and jaw are the symptoms of

a. rabies
b. tetanus
c. botulism
d. Reye's syndrome

_____ 13. A patient with tetanus may receive sedatives, antitoxin therapy and

a. corticosteroids
b. anticonvulsants
c. anti-inflammatories and anti-pyretics
d. neuromuscular blocking agents

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_____ 14. An inflammation of the brain is

a. Guillain-Barre syndrome
b. botulism
c. encephalitis
d. meningitis

_____ 15. A local restaurant served food infected with botulism. The primary medication for hospitalized diners is

a. antitoxin therapy
b. anticoagulants
c. TIG therapy
d. sedatives

_____ 16. Symptoms of encephalitis are similar to the symptoms of meningitis, but a patient with encephalitis may develop

a. hemiplegia and cranial nerve palsies
b. petechiae and severe headache
c. nausea and vomiting
d. high fever and convulsions

_____ 17. Mosquitoes can spread

a. Guillain-Barre syndrome
b. botulism
c. encephalitis
d. meningitis

_____ 18. Polyneuritis that attacks the nerve roots and spinal cord is

a. Guillain-Barre syndrome
b. Reye's syndrome
c. encephalitis
d. meningitis

_____ 19. The primary treatment for Guillain-Barre syndrome is

a. supportive care
b. IV therapy
c. a series of antitoxin injections
d. provide pre- and post-operative care

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_____ 20. The plan of care for patients with tetanus and botulism should include

- a. encourage movement
- b. encourage bed rest
- c. administer anticoagulants, anticonvulsant
- d. nothing by mouth

OBJECTIVE 7

Choose the correct word or phrase to complete statements about cerebral vascular disorders of the central nervous system. Write the correct letter in the blank.

_____ 1. Signs and symptoms of a CVA can include the loss of gag reflex, motor function, communication abilities, sensory and perception, and

- a. the whole visual field
- b. half the visual field
- c. emotional response
- d. cerebral embolism

_____ 2. Rupture of an artery in the brain can cause

- a. gliomas
- b. myocardial infarction
- c. cerebral hemorrhage
- d. cerebral embolism

_____ 3. All of the following can result in a permanent loss of function EXCEPT

- a. cerebral aneurysm
- b. cerebral embolism
- c. CVA
- d. TIA

_____ 4. The extent of injury and the signs and symptoms of cerebral vascular disorders will depend on the

- a. size and location of the blood vessel or vessels affected
- b. cause or causes
- c. age and general physical condition of the patient
- d. speed and accuracy of medical intervention

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_____ 5. A clot that occludes an artery which supplies a major portion of blood to vital centers of the brain is

a. CVA
b. cerebral embolism
c. cerebral hemorrhage
d. cerebral thrombosis

_____ 6. "Little stroke" is another name for

a. TIA
b. CVA
c. cerebral aneurysm
d. cerebral embolism

_____ 7. Medications used to treat CVA include

a. anticoagulants, anticonvulsants, sedatives
b. anti-inflammatory drugs, analgesics, anticoagulants
c. antihypertensives, anticoagulants, stool softeners
d. antibiotics, antihypertensives, muscle relaxants

_____ 8. The characteristic that CVAs and TIAs have in common is

a. the effects are temporary
b. they are caused by a disruption of blood flow
c. they result in loss of consciousness
d. they cause sudden memory loss

_____ 9. Redness in the face, noisy breathing, loss of consciousness, slow but full and bounding pulse, and elevated blood pressure are symptoms of cerebral

a. embolism
b. thrombosis
c. hemorrhage
d. ischemia

_____ 10. Dizziness and ringing in ears, violent headache, nausea and vomiting are symptoms of cerebral

a. embolism
b. thrombosis
c. hemorrhage
d. ischemia

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For questions 11-14, refer to the following scenario:
Frankie McPike is 64 years old, she was admitted into the hospital with a CVA and is lethargic and disoriented.

_____ 11. When you assess Frankie's condition, you expect to also find symptoms of

a. anxiety, restlessness, headache
b. dizziness, seizures, absent gag reflex
c. incontinence, dysphagia
d. pain from spasms, tremors, high fever

_____ 12. You will administer

a. antihypertensives, antibiotics
b. anticoagulants, antispasmodics
c. antipyretics, antidepressants
d. antihypertensives, anticoagulants

_____ 13. When writing your plan of care, you include all the following EXCEPT

a. bed rest
b. soft diet
c. turn, cough, deep-breath every 6 hours
d. observe for shock

_____ 14. Because Frankie may be aphasic, you will need to provide

a. stimulation
b. a call bell
c. physical therapy
d. instructions for home care

OBJECTIVE 8

Choose the correct word or phrase to complete statements about benign and malignant neoplasms of the central nervous system. Write the correct letter in the blank.

_____ 1. Angiomas exhibit all of the following characteristics EXCEPT

a. are benign
b. composed of abnormal blood vessels
c. can be present without symptoms
d. spread to surrounding tissue

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____ 2. The age group most susceptible to brain tumors is

- a. 20-45
- b. 30-55
- c. 40-65
- d. 55-70

____ 3. Implementation to promote healing includes

- a. encourage activity
- b. use seizure precautions
- c. administer antihypertensives
- d. provide cool compresses

____ 4. Surgical removal of gliomas

- a. is a simple procedure
- b. requires multiple surgeries
- c. is difficult because the tumors infiltrate the brain tissue and spread
- d. is difficult because the tumors grow inside specific structures of the brain

____ 5. Ninety-five percent of brain tumors originate in the brain, the rest develop from

- a. metastases
- b. encapsulated tumors
- c. injuries
- d. toxins

____ 6. Symptoms of neoplasms include fear, anxiety, personality changes, localized neurologic impairment and

- a. signs of IICP
- b. hyperactivity
- c. megalomania
- d. muscle rigidity

____ 7. All neoplasms are treated with a

- a. craniectomy
- b. cranioplasty
- c. program specific for each individual
- d. program of chemotherapy specific for each individual

OBJECTIVE 9 **Choose the correct word or phrase to complete statements about degenerative diseases of the central nervous system.** Write the correct letter in the blank.

_____ 1. Deterioration of mental state with reduced intellectual faculties due to inherited organic brain disease is

a. Parkinson's disease
b. Huntington's disease
c. Alzheimer's disease
d. Lou Gehrig's disease

_____ 2. Weakness of muscles without atrophy, because nerve impulses fail to induce normal muscle contractions, is

a. myasthenia gravis
b. multiple sclerosis
c. Alzheimer's disease
d. Parkinson's disease

_____ 3. Weakness and rigidity of the muscles with a slowly spreading tremor in hands and feet is

a. myasthenia gravis
b. multiple sclerosis
c. Alzheimer's disease
d. Parkinson's disease

_____ 4. A degeneration of motor neurons resulting in muscle atrophy until all involuntary movement is affected, and the patient dies is

a. myasthenia gravis
b. multiple sclerosis
c. Huntington's chorea
d. ALS

_____ 5. Respiratory failure is a common cause of death for patients with

a. multiple sclerosis
b. Huntington's chorea
c. Parkinson's disease
d. myasthenia gravis

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_____ 6. Patients with ALS usually die from

a. unknown causes
b. respiratory or renal failure
c. pneumonia or infections
d. presenile dementia

_____ 7. Medications used to treat multiple sclerosis include

a. immunosuppressive agents, antispasmodics,antidepressants, prophylactic antibiotics
b. anti-inflammatories, diuretics, antidepressants, antidiarrheal, antibiotics
c. immunosuppressive agents, muscle relaxants, antidepressants, prophylactic antibiotics
d. antihypertensives, immunosuppressive agents, antidepressants, osmotic diuretics

_____ 8. The disease or disorder characterized by drooping eyelids, a sleepy, mask-like expression, double vision, difficulty in breathing, and muscle weakness is

a. muscular dystrophy
b. myasthenia gravis
c. multiple sclerosis
d. ALS

_____ 9. Compensatory walking techniques, extensive pharmacotherapy and stereotaxic thalamotomy are treatments for

a. Huntington's chorea
b. Alzheimer's disease
c. Parkinson's disease
d. Lou Gehrig's disease

_____ 10. The disease or disorder that includes symptoms of slow paralysis at first, speech and vision disturbances that appear and disappear, tremors, bowel and bladder incontinence, and sensory and sexual impairment is

a. Alzheimer's disease
b. Parkinson's disease
c. multiple sclerosis
d. muscular dystrophy

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_____ 11. As Huntington's chorea progresses, the patient experiences personality changes, dementia, and

a. constant writhing and jerking through the entire body
b. progressive weakening and wasting of muscles
c. fecal impaction
d. progressive muscle rigidity

_____ 12. Mrs. Jessop is one of your home-care patients. She usually doesn't recognize you and communication is difficult because she has memory loss and aphasia. Your focus is to perform interventions to help her maintain her current abilities in an optimal state. Mrs. Jessop is MOST LIKELY to have

a. Lou Gehrig's disease
b. Parkinson's disease
c. Alzheimer's disease
d. Huntington's chorea

_____ 13. The disease or disorder treated with early thymectomy and plasmapheresis is

a. multiple sclerosis
b. Alzheimer's disease
c. Huntington's chorea
d. myasthenia gravis

_____ 14. Medications that might be prescribed for Parkinson's disease include antihistamines, anticholinergics, tricyclic antidepressants, antiviral agents, levodopa therapy, pergolide mesylate and

a. dopamine agonists
b. ACTH
c. antipsychotics
d. quinine therapy

_____ 15. The disease or disorder that requires long-term care for about 20 years is

a. multiple dystrophy
b. myasthenia gravis
c. Huntington's chorea
d. Parkinson's disease

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_____ 16. Spasticity is symptom of

- a. myasthenia gravis
- b. Alzheimer's disease
- c. ALS
- d. Huntington's chorea

_____ 17. Muscle relaxants may be prescribed for

- a. muscular dystrophy
- b. myasthenia gravis
- c. multiple sclerosis
- d. ALS

For questions 18-21, refer to the following scenario:
Leonard Giovanni is 45 years old, he was admitted into the hospital with Huntington's chorea.

_____ 18. While doing your assessment on Leonard, you document symptoms of

- a. high fever, vomiting, apathy
- b. seizures, lethargy, severe headache
- c. slurred speech, irritability
- d. anxiety, paralysis, clenched jaw

_____ 19. Your plan of care for Leonard will include all the following EXCEPT

- a. physical therapy
- b. bed rest
- c. encourage fluid intake
- d. exercises

_____ 20. Your instructions to him will include

- a. maintain seizure precautions
- b. observe for signs of infection
- c. take antispasmodics on schedule
- d. avoid infectious situations

_____ 21. The medications you will administer might include

- a. antipsychotics and antidepressants
- b. muscle relaxants and antispasmodics
- c. antidepressants and anticholinesterase drugs
- d. adduction blocks and pyridostigmine

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OBJECTIVE 10

Choose the correct word or phrase to complete statements about miscellaneous disorders of the central nervous system. Write the correct letter in the blank.

_____ 1. Pressure on nerve trunks resulting in severe sharp pain along the course of nerves is

a. headache
b. Bell's palsy
c. tic douloureux
d. neuralgia

_____ 2. Cephalgia, which the patient experiences in various degrees, intervals, and intensities is

a. headache
b. Bell's palsy
c. tic douloureux
d. neuralgia

_____ 3. Paralysis of one side of the face may be due to vascular ischemia, a brain lesion, or viral disease with

a. headache
b. Bell's palsy
c. tic douloureux
d. neuralgia

_____ 4. The disease that can be due to inadequate nerve nutrition or toxins in the system, and can affect any part of the body is

a. headache
b. Bell's palsy
c. tic douloureux
d. neuralgia

_____ 5. Health care management for a patient with cephalgia includes

a. prevent complications
b. analgesics
c. sedatives
d. corticosteriods

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_____ 6. Degeneration from vascular pressure on the trigeminal nerve (5th cranial) resulting in excruciating pain, felt on the skin, and coming in spasms lasting from two to fifteen seconds is

a. headache
b. Bell's palsy
c. tic douloureux
d. neuralgia

_____ 7. Nonsurgical treatment for tic douloureux includes

a. alcohol or phenol injection
b. alcohol injection and antispasmodic drugs
c. electrical stimulation and analgesics
d. electrical stimulation and anticonvulsive drugs

_____ 8. Swelling of the seventh facial nerve resulting in facial paralysis is

a. headache
b. Bell's palsy
c. tic douloureux
d. neuralgia

For questions 9-13, refer to the following scenario:
Marilyn McFadden has been diagnosed with Bell's palsy. Questions 9-13 refer to her situation.

_____ 9. Marilyn has a typical case of Bell's palsy. Your assessment will document all of the following EXCEPT

a. unilateral paralysis
b. bilateral paralysis
c. uncontrolled lacrimation
d. drooping of the mouth

_____ 10. In addition to the pain and some facial disfigurement, Marilyn is frustrated by her difficulty speaking and needs your assistance with

a. washing herself
b. dressing herself
c. bowel movements
d. eating

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______ 11. Supportive care for Marilyn might include the reassurance that in most cases the disease goes away in

a. 3-5 weeks
b. 4-6 weeks
c. 3-5 months
d. 4-6 months

______ 12. To promote healing, you might assist with electrical stimulation, massage, and administer

a. steroids
b. ACTH
c. anti-inflammatory drugs
d. corticosteroids

______ 13. If you had to provide pre- and postoperative care for Marilyn, her surgery would involve

a. radio frequencies
b. a retromastoid craniectomy
c. decompression of the trigeminal nerve
d. decompression of the facial nerve

OBJECTIVE 11

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the central nervous system. Write the correct letter in the blank.

______ 1. Reye's syndrome is characterized by

a. profound mental retardation
b. complete failure of a single organ
c. rapid progress
d. severe seizures

______ 2. A shunt is used to treat

a. microcephaly
b. myelomeningocele
c. cerebral palsy
d. hydrocephaly

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_____ 3. Marion, age 8, is a CP child who is being mainstreamed into the school where you are working. He wears a brace on one leg and has a moderate speech impediment. He will be seeing the speech therapist, the counselor, and you on a regular basis. You can expect that Marion will

a. have difficulty in his classes because CPs have below-average intelligence
b. need extensive emotional support
c. be in a wheel chair by the end of the year
d. experience increasing spasticity as the disease progresses

_____ 4. Exaggerated arching of the back and either slow muscle contractions or continuous muscle spasms are symptoms of

a. muscular dystrophy
b. Bell's palsy
c. cerebral palsy
d. narcotic abstinence syndrome

_____ 5. Excessive CFS in the ventricles of the brain is

a. Reye's syndrome
b. craniostenosis
c. microcephaly
d. hydrocephaly

_____ 6. The symptoms of craniostenosis include prominence and bony feel of suture line, head deformities, varying degrees of mental retardation, convulsions, and

a. absent fontanels, loss of vision
b. incontinence, facial paralysis
c. loss of consciousness, disorientation
d. exaggerated arching of the back

_____ 7. A child with microcephaly

a. is hyperkinetic
b. requires immediate surgery
c. may have varying degrees of responsiveness
d. is severely mentally retarded

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_____ 8. Medications for Reye's syndrome include

a. sedatives, muscle relaxants, osmotic diuretics
b. anticonvulsants, antihistamines, antiviral agents
c. antibiotics, anticholinergics, sedatives
d. corticosteroids, muscle relaxants, antibiotics

_____ 9. A high-pitched cry is symptomatic of

a. myelomeningocele
b. Reye's syndrome
c. NAS and hydrocephaly
d. hydrocephaly and CP

_____ 10. Reye's syndrome

a. affects the liver, brain, kidneys and heart
b. affects children between the ages of 8 and 18
c. is caused by aspirin
d. usually results in complete recovery

_____ 11. Billie Sue Henson is in treatment for muscular dystrophy. Your job is provide supportive care to her and her parents and to suggest or provide information about therapeutic exercise programs, genetic counseling, and

a. dietary counseling
b. appliances
c. surgical intervention
d. bowel training

_____ 12. A surgical procedure performed for Reye's syndrome is

a. laminectomy
b. craniectomy
c. craniotomy
d. shunt

_____ 13. A pediatric condition in which the muscle fibers gradually degenerate and atrophy is

a. ALS
b. muscular dystrophy
c. multiple sclerosis
d. myasthenia gravis

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_____ 14. A congenital condition of premature closure of the cranial sutures that may result in damage to the eyes and brain is

a. microcephaly
b. craniostenosis
c. cerebral palsy
d. hydrocephaly

For questions 15-18, refer to the following scenario:
You are working OB and on the delivery team for a mother addicted to crack cocaine.

_____ 15. You can expect to see withdrawal signs in the infant

a. immediately
b. within the first hour
c. within the first 4 hours
d. within the first 24 hours

_____ 16. The infant shows signs of NAS, which include all of the following EXCEPT __

a. hyperreflexia and hypertonia
b. repeated vomiting and fever
c. profuse perspiration and tremors
d. mottled coloring and sneezing

_____ 17. You ease the neonate's irritability by

a. administering sedatives
b. additional feedings
c. swaddling
d. slowly decreasing narcotics

_____ 18. This child will MOST LIKELY have

a. multisystem complications
b. HIV antibodies
c. behavior and learning problems
d. physical disabilities

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_____ 19. The symptoms of muscular dystrophy include a delay in motor development, progressive muscle wasting and weakness, abnormal gait, and

a. contractures and deformities of joints
b. spasticity
c. abnormalities in reflex responses
d. tremors

_____ 20. Allen Rushing is a 14-year-old who contracted Reye's syndrome during his recovery from chickenpox. You are providing part of his 24-hour nursing care after he has regained consciousness. You will observe for symptoms of IICP, help him reorient to the environment, provide emotional support and

a. maintain oxygen therapy
b. elevate the head of his bed
c. administer ephedrine sulfate
d. check his neurological status every 4 hours

_____ 21. A form of spina bifida in which a sac-like cyst containing spinal fluid, meninges, a portion of the spinal cord, and/or its nerve roots protrudes through a defective opening in the vertebral column is

a. craniostenosis
b. myelomeningocele
c. meningocele
d. hydrocephaly

_____ 22. Cerebral palsy is

a. caused by a defective gene
b. a progressive cranioneuromotor disorder
c. the #1 cause of permanent disability in children
d. a disease that usually results in mental retardation

_____ 23. Gower's sign is a symptom of

a. MD
b. NAS
c. CP
d. MS

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For questions 24-30, refer to the following scenario:
Audrey McAlester was born with a myelomeningocele in the lumbar region. You are assisting with Audrey's care and helping her parents Richard and Janet adjust to their new situation.

_____ 24. You will expect Audrey to have incontinence and

a. decreased sensory response throughout her body
b. speech and hearing impairments
c. paralysis in the area of the sac
d. paralysis in her hips and legs

_____ 25. Your assessment will include all of the following EXCEPT

a. joint deformities
b. ruptures, leaks or infection
c. depressed respiration
d. IICP

_____ 26. You help with the pre-operative care. Audrey will have

a. spinal fusion
b. laminectomy
c. craniotomy
d. craniectomy

_____ 27. It is likely that after surgery Audrey can develop

a. encephalitis
b. meningitis
c. hydrocephaly
d. spina bifida

_____ 28. Despite their grief, you must encourage Richard and Janet AT THIS TIME to

a. become involved in Audrey's care
b. cuddle and hold Audrey
c. overcome their disgust at her deformities
d. contact a urologist, physical therapist, and orthopedic specialist

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_____ 29. Your teaching plan for Janet and Richard will include taking care of the incision; the physical activities such as feeding, handling and changing Audrey; procedures for elimination; and

a. safety precautions
b. procedures for ambulation
c. catheterization
d. care of her appliances

_____ 30. You are preparing Richard and Janet to take Audrey home. You must help them cope with the fact that she will probably

a. suffer facial deformities and require cosmetic surgery
b. lose motor control and be confined to a wheelchair
c. have long-term problems in a variety of areas
d. have increasing loss of emotional stability

OBJECTIVE 12 **Describe treatment adaptations for children with subdural hematoma and bacterial meningitis.**

Subdural hematoma

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Bacterial meningitis

NOTE: Objectives 13-16 are evaluated on Job Sheets/Assignment Sheet in this unit. If you have not completed these components, see your instructor.

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WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE CENTRAL NERVOUS SYSTEM

III

OBJECTIVE 1

Part 1

1. k
2. h
3. a
4. l
5. e
6. f
7. n
8. j
9. c

Part 2

1. c
2. a
3. i
4. h
5. j
6. g
7. e
8. k
9. b
10. o

OBJECTIVE 2

1. a
2. d
3. a
4. b
5. c
6. b

OBJECTIVE 3

1. a
2. c
3. d
4. a
5. b
6. b
7. b
8. a
9. c
10. b
11. d
12. d

OBJECTIVE 4

1. a
2. a
3. b
4. d
5. a
6. d
7. a
8. c
9. a
10. c
11. c
12. c
13. d
14. c
15. c

OBJECTIVE 5

1. a
2. c
3. b
4. b
5. c
6. c
7. c
8. a
9. b
10. d
11. a
12. d
13. a
14. c
15. a
16. c
17. b
18. c
19. c
20. c
21. b

OBJECTIVE 6

1. d
2. d
3. c
4. d
5. b
6. a
7. b
8. d
9. c
10. b
11. b
12. b
13. d
14. c
15. a
16. a
17. c
18. a
19. a
20. b

OBJECTIVE 7

1. b
2. c
3. d
4. a
5. d
6. a
7. c
8. b
9. a
10. c
11. c
12. d
13. c
14. b

OBJECTIVE 8

1. d
2. d
3. b
4. c
5. a
6. a
7. c

OBJECTIVE 9

1. b
2. a
3. d
4. d
5. d
6. c
7. a
8. b
9. c
10. c
11. a
12. c
13. d
14. a
15. c
16. c
17. d
18. c
19. b
20. d
21. a

OBJECTIVE 10

1. d
2. a
3. b
4. d
5. b
6. c
7. a
8. b
9. b
10. d
11. a
12. a
13. d

OBJECTIVE 11

1. c
2. d
3. b
4. c
5. d
6. a
7. c
8. a
9. c
10. a
11. b
12. b
13. b
14. b
15. d
16. b
17. c
18. c
19. a
20. b
21. b
22. c
23. a
24. d
25. c
26. b
27. c
28. a
29. a.
30. c

OBJECTIVE 12

Answer should include the following points:

Subdural hematoma:

— Newborns are placed in an incubator, with head elevated, and are handled gently and as little as possible.
— Infants should be held and cuddled as much as possible.
— Provide side rail padding for restless children.

Bacterial meningitis:

- Requires isolation for a minimum of 24 hours after antibiotic therapy begins.
- Newborns may be placed in incubators with oxygen support and infants or children may be placed in oxygen tents.
- Children are usually given nothing by mouth or, if they can eat, are given a clear liquid diet that progresses to a normal diet for their ages.
- Provide sucking stimulation for infants on nasogastric or gavage feeding.
- Prolonged intravenous therapy may require restraints and children should be released from these as much as possible.

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: HEART

IV

INTRODUCTION

The heart is a four-chambered elastic pump. It is about the size of a man's fist and weighs less than a pound. Its function is to circulate the blood through the body, supplying nutrients to cells and carrying away waste products. An adult's heart beats about 60 to 70 times a minute, ejecting about five liters of blood per minute into the body. Diseases and disorders of the heart often lead to arrhythmias and acute or chronic cardiac problems.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the heart and associated nursing processes. In addition, you will demonstrate these competencies by completing Assignment Sheets, Job Sheets, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the heart to their correct definitions.
2. Choose the correct word or phrase to complete statements about basic cardiac assessment.
3. Choose the correct word or phrase to complete statements about alterations in cardiac output.
4. Choose the correct word or phrase to complete statements about coronary vascular disease.
5. Choose the correct word or phrase to complete statements about congenital disorders of the heart.
6. Choose the correct word or phrase to complete statements about heart failure.
7. Choose the correct word or phrase to complete statements about inflammatory and infectious diseases of the heart.
8. Choose the correct word or phrase to complete statements about valvular diseases and disorders.

9. Choose the correct word or phrase to complete statements about arrhythmias.

10. Plan care for patients with diseases and disorders of the heart. (Assignment Sheet)

11. Perform a cardiac assessment. (Job Sheet 1)

12. Apply cardiac monitor leads. (Job Sheet 2)

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objective 1, basic information that supports the rest of the unit;

  Part 2 — Objectives 2 and 3, the first two groupings, including basic cardiac assessment and alterations in cardiac output;

  Part 3 — Objectives 4-6, the next three groupings, including coronary vascular disease, congenital disorders of the heart, and heart failure; and

  Part 4 — Objectives 7-9, the next three groupings, including inflammatory and infectious diseases, valvular diseases and disorders, and arrhythmias.
- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a guest speaker to discuss diseases and disorders of the heart.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.
- Obtain models and large pictures of the heart and its structures.

- Make a poster of the heart.
- Make a bulletin board showing the heart and its structures.
- Devise games and/or crossword puzzles to reinforce terms or groupings.
- **HOSA** Integration
  - Assist students to conduct a chapter service project on diseases and disorders of the heart.
  - Develop objectives for service project and identify a theme.
  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.
  - Plan a community or school health project that involves disseminating pamphlets about care of patients with diseases and disorders of the heart.
- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.
- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the heart to their correct definitions.

- Discuss terms associated with the heart and its structures.
- Have students play reinforcement games and work crossword puzzles using terms.
- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about basic cardiac assessment.

- Have students share relevant incidents about friends or family members who have problems related to basic cardiac assessment.
- Review the process of cardiac assessment.
- Stress that students will use the information in this objective to complete Job Sheet 1.

Objective 3: Choose the correct word or phrase to complete statements about alterations in cardiac output.

- Have students share relevant incidents about friends or family members who have problems related to altered cardiac output.
- Have students share ideas that might be helpful in evaluating altered cardiac output.
- Review the structures of the heart and its functions.

Objective 4: Choose the correct word or phrase to complete statements about coronary vascular disease.

- Have students share relevant incidents about friends or family members who have problems related to coronary vascular disease.
- Have students share ideas that might be helpful in evaluating coronary vascular disease.
- Stress that students will use the information in this objective to complete Job Sheet 2.
- Have students complete Assignment Sheet.

Objective 5: Choose the correct word or phrase to complete statements about congenital disorders of the heart.

- Have students share relevant incidents about friends or family members who have problems related to congenital disorders of the heart.
- Have students share ideas that might be helpful in dealing with patients who have chronic problems or children with chronic problems related to congenital disorders.
- Discuss congenital disorders not mentioned in this unit.

Objective 6: Choose the correct word or phrase to complete statements about heart failure.

- Have students share relevant experiences about friends or family members who have problems related to heart failure.
- Have students share ideas that might be helpful in evaluating heart failure.

Objective 7: Choose the correct word or phrase to complete statements about inflammatory and infectious diseases of the heart.

- Have students share relevant experiences about friends or family members who have problems related to inflammatory and infectious diseases of the heart.
- Have students share ideas that might be helpful in evaluating inflammatory and infectious diseases of the heart.
- Discuss diseases not mentioned in this unit.

Objective 8: Choose the correct word or phrase to complete statements about valvular diseases and disorders.

- Have students share relevant experiences about friends or family members who have problems related to valvular diseases and disorders.
- Have students share ideas that might be helpful in evaluating valvular diseases and disorders.
- Discuss valvular diseases and disorders not mentioned in this unit.

Objective 9: Choose the correct word or phrase to complete statements about arrhythmias.

- Have students tell about friends or family members who have problems related to arrhythmias.
- Have students share ideas that might be helpful in evaluating arrhythmias.
- Show examples of EKG charts for each arrhythmia.
- Discuss arrhythmias not mentioned in this unit.
- Review the procedure for CPR and a code blue.

APPLICATION

- Make a video or skit having to do with patient care of a person with problems associated with the heart. Either the students or the teachers can be the presenters.

- Students can practice care of the patient with problems associated with this unit.

- Have students present a one-minute speech on care of a patient with problems associated with the heart.

Objective 10: Plan care for patients with diseases and disorders of the heart. (Assignment Sheet)

- Use the Assignment Sheet to give students an opportunity to practice ideas that will help when they plan care for a patient with diseases and disorders of the heart.

- Provide a care plan form for students' use.

Objective 12: Perform a cardiac assessment. (Job Sheet 1)

- Use Job Sheet 1 to give students hands-on experience in performing a cardiac assessment.

- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 13: Apply cardiac monitor leads. (Job Sheet 2)

- Use Job Sheet 2 to give students hands-on experience in applying cardiac monitor leads.

- Use a mannequin to practice and demonstrate procedures in the classroom.

EVALUATION

Pretest

- Give Written Test as pretest.

- Determine individual study requirements from pretest results.

- Counsel students individually on pretest results and study requirements.

- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.

- Evaluate students on Job Sheet activities.
- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.
- Complete appropriate sections of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.
- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *American Institute for Cancer Research Newsletter.* 1759 R. Street, N.W., Washington, D.C. 20009

- *University of California Berkeley Wellness Letter.* 48 Shattuck Square, Suite 43, Berkeley, Ca. 94704-1140.
- *Tufts University Diet and Nutrition Letter.* 53 Park Place, New York, NY 10007.

UNIT REFERENCES

- Betz, Cecily Lynn, and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis, and Doris Smith Suddarth, *Textbook of Medical-Surgical Nursing* (5th ed.). Philadelphia: J.B. Lippincott Co., 1984.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing.* St. Louis: Mosby Year-Book, Inc., 1991.
- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.
- *OK Diet Manual* (8th ed.). Oklahoma Dietetic Association, 1987.
- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing. Philadelphia*: W.B. Saunders Company, 1990.
- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.
- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C. V. Mosby Company, 1990.

APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: HEART

OBJECTIVE 1

Match terms associated with diseases of the heart to their correct definitions.

- **aneurysm** — Local dilated area of a blood vessel, caused by weakening of a vessel wall
- **arrhythmia** — An irregularity in the heart's normal sinus rhythm
- **decompensation** — Inability of the heart to maintain normal or adequate circulation
- **murmur** — Soft blowing sound heard in the patient's chest that may indicate heart disease
- **pallor** — Colorless appearance to the skin
- **palpitation** — Fluttering or throbbing sensation felt in the chest
- **S-A node** — The sinoatrial node (also known as the pacemaker node), source of the electrical impulse that initiates the heartbeat
- **stenosis** — Narrowing of blood vessels, which causes constriction

OBJECTIVE 2

Choose the correct word or phrase to complete statements about basic cardiac assessment.

- **General appearance** — The patient's level of consciousness, the location, intensity, and duration of chest pain, color and temperature of skin, presence of diaphoresis, appropriateness of thought content, level of anxiety, and input from family members are all essential to initial impressions.
- **Mental status** — Assess the patient's level of consciousness, memory, orientation, cognition, and mood.
- **Pain** — Record the patient's description of location, intensity, and duration of any pain. Have the patient rate the pain on a scale of 1-10. Ask what factors aggravate or alleviate pain, as well as the patient's activity at time of onset.

- **Blood pressure** — Use the appropriate size cuff, and take the blood pressure in both arms. The readings should be similar, and the results compared with previous readings. The blood pressure should be taken standing, sitting, and supine.

- **Radial pulse** — Take the pulse rate in both arms and assess for fullness, smoothness, and strength.

- **Auscultation** — Use a stethoscope to listen to heart and lung sounds. Note the presence of any abnormal or extra sounds. More detailed auscultation is performed by the physician or RN.

- **Temperature** — Oral or tympanic temperatures are usually taken on cardiac patients. Rectal temperatures are contraindicated because anal entry can stimulate the vagus nerve.

- **Heart rate** — Place the stethoscope over the heart and listen for rhythm, intensity, volume, and regularity.

- **Respiration** — The rate and quality are appraised for regularity, depth and pattern; observe chest movements while assessing. Note if the patient complains of dyspnea or shows symptoms of respiratory difficulties.

- **Jugular pulse** — Inspect the patient's neck and note if a venous pulse can be seen. A distended vein may be seen or felt.

- **Edema** — Inspect and palpate for edema, especially in the sacrum, legs, ankles, and feet. Note if the edema disappears when the affected body part is elevated or if there is any pitting edema.

- **Sputum** — Ask the patient to cough. Note the presence, amount, and color of any sputum, especially if it is bloody or frothy.

- **Abdomen** — Place the stethoscope over the abdomen and listen for bowel sounds. Note the contour and palpate for bladder fullness or any pulsating masses. Ask if the patient feels any pain.

- **Weight** — Measure and record the patient's weight daily.

- **Extremities** — Note the skin color and temperature, presence or absence of swelling or pain, presence of ulcerations, and ability to move.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about alterations in cardiac output.

- **Dyspnea** — Shortness of breath and difficulty breathing. An inadequate gas exchange from fluid that has accumulated in the lungs makes breathing difficult. It may be worse when the patient is active. *Orthopnea* is difficulty breathing while lying flat; patients feel they are suffocating and must sit upright to breathe. *Cheyne-Stokes* breathing is characterized by periods of no breathing (apnea), followed by shallow breathing that becomes deeper and more rapid. It is common in patients with pulmonary edema.
- **Chest pain** — Occurs in various degrees and intensities. The location and duration are important for diagnostic purposes. Pain that begins in the chest and radiates down the arms, up to the neck and jaws, or spreads through the chest can indicate either *angina pectoris* or *myocardial infarction*. Anginal pain is relieved by rest; pain from a myocardial infarction is not. Pain that begins in the chest, then spreads over the shoulders and down to the stomach may indicate pericarditis. Anxiety may cause chest pain which intensifies with breathing.
- **Chest palpitation** — Discomfort in the chest described as pounding or jumping can indicate arrhythmias or other heart disorders.
- **Edema** — Localized or systemic accumulation of fluid in the body's tissues that causes swelling. Causes can include congestive heart failure, sodium retention, fluid overload, or venous insufficiency.
- **Fatigue** — Patients may feel tired or weak if they do not have sufficient oxygenation throughout the body, which may be due to low cardiac output.
- **Dizziness** — Patients may experience dizziness if they do not have sufficient oxygenation throughout the body due to low cardiac output or arrhythmias
- **Skin color and temperature** — Pallor, flushing, cool, warm, or moist skin are symptoms often associated with reduced cardiac output. Cyanosis is a bluish color of the skin and mucous membranes. Causes include low cardiac output and restricted circulation from congestive heart failure and pulmonary edema.
- **Abdominal pain** — Can be a symptom of cardiac abnormalities depending on the duration, intensity, and location. Heart attacks, congestive heart failure, aneurysm, and circulatory obstructions can produce abdominal pain.

OBJECTIVE 4 **Choose the correct word or phrase to complete statements about coronary vascular disease.**

Description and etiology

Myocardial infarction (MI) — Sometimes called a *heart attack* or *coronary occlusion*. A sudden blockage of one of the coronary arteries that supply blood to the heart causes ischemia and death to tissues. MI is a medical emergency.

Causes

- Atherosclerosis
- Coronary thrombosis
- Prolonged arterial constriction

Health care management

- Call for emergency help if necessary
- Prevent complications
- Reduce the heart's workload
- Rehabilitation
- Surgeries: coronary artery bypass graft, coronary transplant
- Medications: vasopressors, anticoagulants, analgesics, tranquilizers, thrombolytic agents, nitrates, beta-adrenergic blockers, calcium channel blockers, salicylates, antidysrhythmics, stool softeners, diuretics, electrolyte replacement
- Complications: arrhythmias, hemorrhage, death

ASSESSMENT **Signs and symptoms**

Myocardial infarction

- Sudden, severe pain described as crushing, squeezing, or viselike
- Pain is long-lasting and does not diminish with rest, position change, or nitroglycerin
- Pain may be referred to:
  - — Upper chest
  - — Beneath sternum, radiating to neck and jaw or down left arm
  - — Epigastric area; may radiate to neck, jaw, and arms
  - — Neck and jaw
  - — Intrascapular area
  - — Left shoulder and inner aspect of arms
- Anxiety
- Weak or faint feeling

- Dyspnea
- Nausea, vomiting
- Pallor and diaphoresis
- Cyanosis
- Hypotension

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

MYOCARDIAL INFARCTION

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Call for emergency help if necessary • Minimize stress • Provide a quiet room; limit visitors • Maintain bed rest with progressive activity • Administer medications and oxygen • Provide emotional support • Assist with IPPB treatments • Provide appropriate diet
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor and assess EKGs • Monitor complaints of chest pain • Monitor lab values • Weigh patient daily • Observe for complications • Assist with monitoring IV
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.

- Contribute to plan of care update.

Description and etiology

Angina pectoris — A syndrome that involves chest pain from insufficient coronary blood flow and inadequate oxygen supply to the myocardial muscle. An occlusion of major heart vessels from a gradual partial obstruction causes a diminished coronary blood flow, resulting in decreased oxygen delivery to meet the body's demands.

Causes

- Atherosclerosis
- Diabetes mellitus
- Coronary thrombosis
- Prolonged arterial constriction
- Hypertension

Health care management

- Reduce myocardial oxygen needs
- Symptomatic relief
- Medications: nitrates, beta-adrenergic blockers, calcium channel blockers, salicylates
- Surgeries: percutaneous transluminal coronary angioplasty (PTCA), coronary artery bypass graft (CABG)

ASSESSMENT

Angina pectoris

Signs and symptoms

- Sudden diffuse pain, described as dull and heavy, may be confused with indigestion
- Pain may be referred to:
  - Upper chest
  - Beneath sternum, radiating to neck and jaw or down left arm
  - Epigastric area; may radiate to neck, jaw, and arms
  - Neck and jaw
  - Intrascapular area
  - Left shoulder and inner aspect of arms
- Pain is relieved by rest or nitroglycerine
- Pain may become squeezing or crushing and be confused with myocardial infarction

- Pain may be precipitated by

  - Physical exertion
  - Emotional excitement
  - Extremely hot or cold temperatures
  - Heavy meals

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ANGINA PECTORIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer nitroglycerin sublingualy as attack begins • Encourage rest as needed • Provide emotional support • Minimize stress
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor and assess EKGs • Observe for complaints of pain • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.

- Assess vital signs again, report any changes.

- Contribute to plan of care update.

Description and etiology

Coronary artery disease (CAD) — Any pathologic condition that obstructs the myocardium's blood supply. Atherosclerosis is the most common factor. Other conditions include arteriosclerosis, arteritis, coronary artery spasms, coronary thrombosis, and embolism. Because there is little overlapping of blood supply to the heart, occlusion of a coronary artery causes ischemia of myocardial tissue, which could lead to sudden death.

Risk factors

- Age (risk increases with age)
- Sex (males and menopausal females are at greater risk)
- Race (African-Americans are at greater risk)
- Family history of coronary disease
- Hypertension
- Elevated serum cholesterol and triglyceride levels
- Obesity
- Cigarette smoking
- Diabetes mellitus
- Lack of exercise
- Stress
- Use of oral contraceptives

Health care management

- See myocardial infarction and angina pectoris

ASSESSMENT

Signs and symptoms

Coronary artery disease

- See myocardial infarction and angina pectoris

OBJECTIVE 5

Choose the correct word or phrase to complete statements about congenital disorders of the heart.

Congenital heart disease is a malformation of the heart's structure or great vessels that exists at birth. Causes include abnormal embryonic development, dietary deficiencies of the mother, fetal and maternal infection, teratogenic substances, and genetic factors. Heart disease is the most common congenital disorder.

Description and etiology

Aortic valvular stenosis — A malformation of the valve causing an obstruction of ventricle outflow at the valve leaflet. Blood flows from the left ventricle through the obstructed aortic valve into the aorta.

Causes

- Embryonic abnormalities
- Infection

Health care management

- Complications: congestive heart failure, myocardial infarction, bacterial endocarditis (inflammation of the lining of the heart)
- Surgeries: aortic valvulotomy, valve replacement

ASSESSMENT

Aortic valvular stenosis

Signs and symptoms

- Infants are usually asymptomatic
- Older children and adults experience chest pain, fatigue, and dyspnea
- Narrow pulse pressure (little difference between systolic and diastolic pressure), weak peripheral pulses
- Click, harsh murmur heard on auscultation
- Edema
- Chronic CHF

Description and etiology

Atrial septal defect (ASD) — An abnormal opening in the septum between the left and right atria. Pressure in the left atrium is greater than the right atrium. Oxygenated blood flows from the left to the right through the defect and mixes with systemic blood returning to the lung, increasing total blood volume in the lung.

Causes

- Varies

Health care management

- Complications: mitral valve prolapse, atrial arrhythmias, infective endocarditis, cardiac failure, pulmonary hypertension, coronary artery disease, atrial fibrillation
- Surgeries: suturing, grafting, patching, cardiopulmonary bypass

ASSESSMENT

Atrial septal defect

Signs and symptoms

- Patient is often asymptomatic
- Slow weight gain

- Fatigue and dyspnea with exertion
- Frequent respiratory infections
- Murmur heard on auscultation

Description and etiology

Ventricular septal defect — An abnormal opening in the septum between the left and right ventricles. Pressure in the left ventricle is greater than the right ventricle. Oxygenated blood flows from the left to the right through the defect, mixes with the blood returning from the right atrium, recirculates through the lung, increasing total blood volume in the lungs. Approximately 50% of these defects close spontaneously.

Causes

- Varies

Health care management

- Complications: infective endocarditis, congestive heart failure
- Surgeries: suturing, grafting, patching

ASSESSMENT

Signs and symptoms

Ventricular septal defect

- Small defects are usually asymptomatic and may close spontaneously
- Feeding difficulties and slow weight gain
- Frequent respiratory infections
- Tachypnea
- Excessive sweating

Description and etiology

Patent ductus arteriosus (PDA) — An opening between the aorta and the pulmonary artery. This opening, called the *ductus arteriosus*, allows blood to bypass the lung in the fetus. The ductus normally closes shortly after birth. In the patient with PDA, the ductus remains open, allowing blood to flow from the aorta in the pulmonary artery and lungs. PDA is one of the most common congenital heart disorders.

Causes

- Exposure to rubella in utero
- Birth weight less than 1200 grams

Health care management

- Complications: congestive heart failure, endocarditis

- Surgeries: ligation
- Medications: anti-inflammatory agents, analgesics

ASSESSMENT

Patent ductus arteriosus

Signs and symptoms

- Patient with small defect may be asymptomatic
- Machine-like murmur heard on auscultation
- Slow weight gain and feeding difficulties
- Frequent respiratory infections

Description and etiology

Tetralogy of Fallot — *Tetra* means four. This condition consists of four defects: (1) ventricular septal defect; (2) stenosis of the pulmonary artery; (3) dextroposition of the aorta (deviated to the right), which allows blood from both ventricles to enter the aorta; and (4) hypertrophy of the right ventricle, caused by the extra workload on the heart.

Causes

- Varies

Health care management

- Surgeries: open heart surgery
- Surgery may be staged, with palliative surgery used to increase blood flow to the lungs before the child can endure open heart surgery
- Complications: growth retardation, mental retardation, congestive heart failure, endocarditis, CVA, iron deficiency anemia

ASSESSMENT

Tetralogy of Fallot

Signs and symptoms

- Cyanosis
- Clubbing of fingers and toes
- Characteristic squatting position in older children (eases dyspnea)
- Slow weight gain
- Murmur, click heard on auscultation
- TET spells (cyanosis, pallor, irritability, blackouts, convulsions)

Description and etiology	**Coarctation of the aorta** — Narrowing or constricting of the aortic arch or descending aorta.
Causes	• Varies
Health care management	• Surgeries: anastomosis • Complications: congestive heart failure, endocarditis, rupture of the aorta, cerebral hemorrhage
ASSESSMENT	**Signs and symptoms**
Coarctation of the aorta	• Usually asymptomatic until late childhood • Hypertension in upper extremities, hypotension in lower extremities
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

CONGENITAL HEART DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide emotional support for patient and parents • Provide adequate nutrition and fluid to meet the needs of a growing child • Prevent infection • Reduce the workload on the heart • Give pre- and postoperative care • Administer medications
• Continually monitor patient's condition	• Watch for signs of congestive heart failure, endocarditis, other complications • Monitor vital signs, I/O • Monitor and assess EKGs • Monitor lab values • Weigh patient daily
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about heart failure.

Description and etiology

Congestive heart failure (CHF) — The heart ceases to maintain blood circulation effectively. Inadequate circulation leads to an accumulation of fluid in the body tissues.

Causes

- Congenital heart disease
- Myocardial infarction
- Decreased kidney function
- Fluid overload (especially postoperative)
- Rheumatic fever
- Endocarditis
- Valvular heart disease

Health care management

- Promote adequate cardiac output
- Reduce the amount of fluid in the body; limit fluid intake
- Reduce exertion; encourage rest
- Oxygen therapy
- Complications: pulmonary edema
- Medications: diuretics, digitalis (may be given in a large initial dose to induce the full effect quickly; this is known as *digitalizing*)

ASSESSMENT

Signs and symptoms

Congestive heart failure

- Dyspnea, nonproductive cough
- Edema

- Apnea, tachypnea, orthopnea
- Weakness, fatigability
- Restlessness
- Change in level of consciousness
- Anxiety
- Distended neck veins
- Nocturia
- Insomnia
- Anorexia, nausea

Description and etiology

Pulmonary edema — An excess of fluid accumulates in the lung, causing edema. This condition is often precipitated by an acute left ventricular failure. Acute pulmonary edema is a medical emergency.

Causes

- Heart disease or injury (myocardial infarction, aortic stenosis, hypertension, congestive heart failure)
- Drug overdose, poisoning, or hypersensitivity
- Circulatory overload from rapid administration of IV fluids
- Lung injuries
- CNS injuries

Health care management

- Treatment involves many simultaneous interventions to promote oxygenation, reduce venous return to the heart, increase cardiac output, and decrease anxiety
- Reduce the workload on the heart
- IPPB treatment
- Medications: diuretics, digitalis, aminophylline, corticosteroids

ASSESSMENT

Signs and symptoms

Pulmonary edema

- Dyspnea, orthopnea

- Coughing with thin, frothy sputum that may be white or pink
- Restlessness, uneasiness, panic
- Tachycardia
- Pallor or cyanosis
- Change in level of consciousness
- Diaphoresis
- Wheezing and bubbling sounds when breathing

Description and etiology

Cor pulmonale (pulmonary heart disease) — Hypertrophy and eventual failure of the right ventricle, usually resulting from a lung disorder. Left-sided cor pulmonale may also occur; it is usually caused by heart disease.

Causes

- Cigarette smoking
- Chronic obstructive pulmonary disease (COPD)
- Chronic bronchitis
- Emphysema
- Living at high altitude
- Conditions that restrict ventilatory function
- Pulmonary vascular disease

Health care management

- Improve ventilation and reduce hypoxia
- Prevent respiratory infection
- Complications: arrhythmias
- Medications: diuretics, digitalis, vasodilators, beta-adrenergic drugs
- Encourage patient to quit smoking, if applicable

ASSESSMENT

Cor pulmonale

Signs and symptoms

- Progressive, increasing dyspnea

- Chronic cough
- Peripheral edema
- Signs of carbon monoxide poisoning (headache, confusion, coma)

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

HEART FAILURE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Keep patient calm • Administer oxygen • Promote rest • Use positioning techniques (such as orthopneic position) to ease workload on heart and lungs • Assist with IPPB treatments • Restrict intake of sodium and fluids, if appropriate
• Continually monitor patient's condition	• Monitor vital signs, I/O • Watch for signs of decreased cardiac output, complications, shock • Watch for signs of digitalis toxicity • Weigh patient daily
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 7

Choose the correct word or phrase to complete statements about inflammatory and infectious diseases of the heart.

Description and etiology

Rheumatic heart disease — Inflammatory disease affecting the tissues of the heart. The endocardium (including valves), myocardium, and pericardium may be involved. Vegetation areas (Aschoff bodies) develop in the myocardium, resulting in scar tissue. Valves may fuse or become incompetent. Rheumatic heart disease is a sequela of rheumatic fever, which may or may not have been diagnosed in childhood (rheumatic fever usually affects those between the ages of 5 and 15). Patients are predisposed to streptococcal infections of the upper respiratory tract. The condition can become recurrent.

Causes

- Group A hemolytic *streptococci* (fewer than 10% of patients with rheumatic fever develop rheumatic heart disease)

Health care management

- Prevention is important — those who have had rheumatic fever should receive antibiotic therapy for pharyngeal infections and before undergoing dental work
- Bed rest and symptomatic treatment for joint pain (analgesics, heat)
- Well-balanced, high-calorie diet
- Medications: antibiotics, corticosteroids, diuretics, digoxin
- Complications: congestive heart failure, valvular disease

ASSESSMENT

Rheumatic heart disease

Signs and symptoms

- Fever
- Increased pulse
- Joint pain
- Anemia
- History of rheumatic fever or pharyngeal infection

Description and etiology

Endocarditis — Infection or inflammation of the endocardium involving the heart valves. Infective organisms are carried in the bloodstream and deposited on the heart valves. Vegetative growths develop, which can perforate the valves or chambers. These growths can break away and move into the bloodstream, causing emboli, infection, or abscesses in other organs, especially in the kidneys and spleen.

Causes

- Infection, often associated with
  - Rheumatic disease
  - Intrusive procedures (such as dental work or insertion of indwelling urinary catheter)
  - Drug abuse (infection from contaminated needles)

Health care management

- Decrease the heart's workload — bed rest is important
- Medications: antibiotics
- Surgeries: valvuloplasty, valve replacement
- Complications: congestive heart failure

ASSESSMENT

Signs and symptoms

Endocarditis

- Flu-like symptoms
  - Malaise
  - Fever
  - Aches
- Petechiae in conjunctiva, mouth
- Anemia
- Murmur heard on auscultation
- Rapid pulse
- Clubbing of fingers

Description and etiology

Pericarditis — Inflammation of the pericardium. The inflammation may be *fibrinous* (the pericardial sac becomes fibrous) or *exudative* (*pericardial effusion:* fluid accumulates in the pericardial sac). This compresses the heart, decreasing cardiac output. The condition may be acute or chronic. Chronic pericarditis, also called *chronic constrictive pericarditis*, always takes the fibrinous form and can last up to six months.

Causes

- Infection (viral, bacterial, or fungal)
- Trauma
- Neoplasm
- Complication of systemic disease

Health care management

- Treatment of underlying condition
- Pain relief
- Medications: analgesics, antibiotics, anti-inflammatory agents, digitalis, diuretics, corticosteroids, salicylates
- Surgeries: pericardiectomy, pericardial fenestration, pericardial tap
- Complications: cardiac tamponade (compression of the heart caused by fluid in the pericardial sac), shock

ASSESSMENT **Signs and symptoms**

Pericarditis

- Severe precordial pain referred to neck, shoulder, left arm
- Pain is intensified when coughing, breathing deeply, swallowing, or lying supine
- Friction rub heard on auscultation
- Dyspnea
- Fever, chills
- Paradoxical pulse

Description and etiology

Myocarditis — Inflammation of the myocardium. This condition may be acute or chronic; it is often secondary to acute endocarditis or pericarditis.

Causes

- Infection
- Autoimmune reaction or immunosuppressive therapy
- Drugs, chemicals
- Radiation

Health care management

- Symptomatic relief
- Bed rest
- Medications: antibiotics, corticosteroids

ASSESSMENT	**Signs and symptoms**
Myocarditis	• May be asymptomatic • Dyspnea and fatigue on exertion • Precordial pain • Murmur heard on auscultation
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

INFLAMMATORY AND INFECTIOUS DISEASES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Maintain bed rest • Encourage frequent small meals, adequate fluid intake • Administer medications • Assist in relieving pain and dyspnea • Prevent infection • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Watch for signs of congestive heart failure, cardiac tamponade, shock
• Plan for patient's discharge	• Prepare teaching plan • Discuss the need for antibiotic therapy before dental work or intrusive procedures • Discuss signs of recurrent rheumatic fever

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

OBJECTIVE 8 **Choose the correct word or phrase to complete statements about valvular diseases and disorders.**

Description and etiology

Mitral stenosis — Progressive thickening of the bicuspid leaflets of the mitral valve results in narrowing of the orifice. This prevents the flow of blood from the left atrium into the left ventricle and causes the heart to work harder, leading to hypertrophy of the left atrium, congestion, and pulmonary hypertension.

Causes

- Rheumatic fever
- Congenital factors

Health care management

- Limit activity
- Provide low-sodium, low-fat diet
- Medications: vasodilators, digitalis
- Surgeries: valvotomy, valve replacement
- Complications: congestive heart failure

ASSESSMENT **Signs and symptoms**

Mitral stenosis

- Fatigue, weakness
- Dyspnea on exertion, orthopnea
- Coughing, frequent respiratory infections
- Murmur heard on auscultation
- Weight loss
- Pulmonary edema (late stages)

Description and etiology

Mitral insufficiency — Damage to the mitral valve prevents it from closing completely, allowing blood to leak from the left ventricle back into the left atrium. Increased pressure causes the left atrium to hypertrophy, which in turn causes hypertrophy of the left ventricle.

Causes

- Rheumatic fever
- Mitral valve prolapse

- Endocarditis
- Trauma

Health care management

- Limit activity
- Provide low-sodium diet
- Medications: diuretics, digoxin
- Surgeries: valvuloplasty, valve replacement

ASSESSMENT

Mitral insufficiency

Signs and symptoms

- Fatigue
- Exertional dyspnea
- Weight loss
- Orthopnea
- Pulmonary edema

Description and etiology

Aortic stenosis — Thickening of the three leaf valves increases the work of the left ventricle, leading to hypertrophy and eventual failure.

Causes

- Rheumatic heart disease
- Congenital factors

Health care management

- Limit activity
- Provide low-sodium diet
- Medications: diuretics, digoxin, nitroglycerin (for angina)
- Surgeries: valve replacement
- Complications: congestive heart failure

ASSESSMENT

Aortic stenosis

Signs and symptoms

- Angina pectoris
- Dyspnea and fatigue on exertion

- Dizziness, syncope
- Low blood pressure
- Pulmonary edema
- Murmur heard on auscultation

Description and etiology

Aortic insufficiency — Inflammatory lesions damage the aortic valve flaps, preventing them from closing completely. Blood leaks from the aorta back into the left ventricle. The extra blood causes hypertrophy and eventual failure of the left ventricle.

Causes

- Rheumatic fever
- Congenital factors
- Endocarditis
- Syphilis
- Trauma

Health care management

- Provide low-sodium diet
- Medications: digoxin, diuretics, nitroglycerin (for angina), antibiotics
- Surgeries: valvuloplasty, valve replacement

ASSESSMENT

Signs and symptoms

Aortic insufficiency

- Bounding pulse
- High systolic blood pressure

Description and etiology

Tricuspid stenosis — Rare disorder that causes the leaflets to thicken and fuse together.

Causes

- Rheumatic fever
- Carcinoid heart disease
- Fibroelastosis (overgrowth of fibroelastic tissue)

Health care management

- Provide low-sodium diet
- Medications: digoxin, diuretics
- Surgeries: valvuloplasty, valve replacement

ASSESSMENT

Signs and symptoms

Tricuspid stenosis

- Dyspnea, orthopnea
- Weakness and fatigue
- Pulsation of neck veins
- Murmur heard on auscultation

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

VALVULAR DISEASES and DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Restrict sodium intake • Limit activity and encourage adequate bed rest • Administer medications • Provide calm environment • Provide pre- and postoperative care
• Continually monitor patient's condition	• Observe for signs of congestive heart failure • Weigh patient daily
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.

- Contribute to plan of care update.

OBJECTIVE 9

Choose the correct word or phrase to complete statements about arrhythmias.

Normal sinus rhythm occurs with a normal rate of 60 to 100 beats. A regular pattern is seen on an EKG (electrocardiogram).

Description and etiology

Sinus bradycardia — S-A node fires at a slower than normal rate (below 60/minute) with a regular rhythm. A sinus bradycardia is seen on an EKG at 40-60 beats/minute. Cardiac output is decreased unless the heart compensates by increasing stroke volume.

Causes

- Enlarged heart from strenuous exercise
- Increased intracranial pressure
- Hypothyroidism
- Stimulation of parasympathetic nervous system
- Digitalis toxicity
- Reduced oxygen in sinus node

Health care management

- Treat underlying condition
- Reevaluate cardiac medications
- Medications: atropine (if symptomatic)
- Surgeries: pacemaker insertion

ASSESSMENT

Signs and symptoms

Sinus bradycardia

- Syncope
- Vertigo

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

SINUS BRADYCARDIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care if needed • Provide low-sodium diet
• Continually monitor patient's condition	• Monitor and assess EKGs • Monitor vital signs, I/O • Watch for signs of decreased perfusion
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Sinus tachycardia — Pacemaker at S-A node with regular rhythm but increased rate (above 100 beats per minute). Sinus tachycardia can increase the workload of the heart to the point of decompensation.

Causes

- Pain
- Fever
- Anxiety
- Hemorrhage or anemia
- Shock
- Drugs, including excessive caffeine

- Strenuous exercise or strong emotions
- Myocardial infarction
- Coronary artery disease

Health care management

- Treat underlying condition
- Medications: beta-adrenergic blockers, calcium channel blockers, cardiac glycosides
- Surgeries: converter implant

ASSESSMENT

Signs and symptoms

Sinus tachycardia

- Fatigue
- Dyspnea

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

SINUS TACHYCARDIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide low-sodium diet • Provide pre- and postoperative care if needed
• Continually monitor patient's condition	• Monitor and assess EKGs • Monitor vital signs, I/O • Monitor complaints of chest pain • Observe for signs of ventricular failure
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Ventricular tachycardia — A ventricular rhythm of more than 100 beats per minute. Ventricular tachycardia is a medical emergency.

Causes

- Myocardial infarction
- Metabolic acidosis
- Certain drugs

Health care management

- Defibrillation if the patient is unconscious
- Cardioversion if the patient is conscious
- Medications: cardiac depressants

ASSESSMENT

Ventricular tachycardia

Signs and symptoms

- Rapid heartbeat
- Hypotension
- Loss of consciousness
- Respiratory arrest

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

VENTRICULAR TACHYCARDIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Call for emergency help if needed • Assist in defibrillation or cardioversion if necessary • Administer medications
• Continually monitor patient's condition	• Monitor and assess EKGs • Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Ventricular fibrillation — Disorganized, rapid, and ineffective pulsations of the ventricles. A ventricular fibrillation with an unidentifiable rate is seen on an EKG. There is no cardiac output. Ventricular fibrillation is a medical emergency; this condition is fatal unless treated immediately.

Causes

- Toxic effects of drugs such as digitalis, chloroform, or quinidine
- Trauma
- Myocardial infarction
- Occlusion of the coronary vessels
- Electrocution
- Drowning
- Electrolyte imbalances

Health care management

- Defibrillation performed by a physician or specially trained health care worker

  NOTE: Do not touch the patient or bed while defibrillation is being performed.

- Administration of oxygen
- Cardiopulmonary resuscitation to maintain life until defibrillation can be performed
- Medications: cardiac depressants, antifibrillatory agents, sodium bicarbonate, epinephrine hydrochloride
- Complications: cardiac arrest, death

ASSESSMENT

Signs and symptoms

Ventricular fibrillation

- Early signs: dyspnea, nausea, vomiting, dizziness, cyanosis, palpitation, hypotension
- Altered level of consciousness or unconsciousness

- Lack of pulse and heart sounds
- Lack of respiration

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

VENTRICULAR FIBRILLATION

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Call for emergency help if needed • Assist in defibrillation if necessary • Administer medications
• Continually monitor patient's condition	• Monitor and assess EKGs • Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Atrial fibrillation — A common arrhythmia resulting from rapid overfiring of the atrial node. The atrium does not contract as a whole; atrial contractions are random and scattered. Atrial fibrillation is described as *controlled* (ventricular response is 100 beats per minute or less) or *uncontrolled*.

Causes	• Mitral stenosis • Myocardial infarction • Rheumatic heart disease
Health care management	• Treat underlying condition • Cardioversion • Controlled atrial fibrillation may be left untreated • Medications: cardiac depressants, cardiac glycosides
ASSESSMENT	**Signs and symptoms**
Atrial fibrillation	• Palpitations • Discomfort in the chest • Tachycardia • Irregular pulse
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

ATRIAL FIBRILLATION

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist in cardioversion if necessary • Administer medications
• Continually monitor patient's condition	• Monitor and assess EKGs • Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Premature ventricular contractions (PVCs) — Ventricular ectopic beats occur before the atrial impulse beats; the rate may be normal but the rhythm is irregular. PVCs can significantly reduce cardiac output and can lead to ventricular tachycardia or ventricular fibrillation if not corrected promptly.

Causes

- Heart disease (especially myocardial infarction)
- Electrolyte imbalance
- Pulmonary diseases
- Metabolic instability
- Caffeine, nicotine, alcohol

Health care management

- Treat underlying cause
- Symptomatic relief
- Oxygen administration
- Medications: lidocaine IV, procainamide, epinephrine, antifibrillatory agents

ASSESSMENT

Premature ventricular contractions

Signs and symptoms

- Pain and palpitations
- Vertigo
- Syncope

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PREMATURE VENTRICULAR CONTRACTIONS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide low-sodium, low-fat diet
• Continually monitor patient's condition	• Monitor and assess EKGs • Monitor vital signs, I/O • Observe for complications • Immediately report conditions that affect electrolyte balance (diarrhea, vomiting) • Observe for signs of lidocaine toxicity (CNS symptoms)
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Complete heart block (third-degree heart block) — Failure of the AV node to conduct normal sinus node impulses to the ventricles. Secondary pacemaking cells, which are slower and less dependable, control the ventricles.

Causes

- Toxic effects of drugs or toxins from infections
- Structural changes due to coronary artery occlusion or tumors
- Chronic degenerative disease

Health care management

- Temporary or permanent pacemaker
- Medications: isoproterenol, epinephrine, atropine
- Surgeries: pacemaker insertion

ASSESSMENT

Signs and symptoms

Complete heart block

- Stokes-Adams syndrome — periodic episodes of dizziness, faintness, loss of consciousness, convulsions caused by decreased flow of blood to the brain
- Chest pain

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

COMPLETE HEART BLOCK

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care if needed
• Continually monitor patient's condition	• Monitor and assess EKGs • Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

DIAGNOSTIC PROCEDURES

Angiogram — Invasive visualization of the circulatory system using radiopaque dye and x-rays

Cardiac catheterization — An invasive procedure used to measure pressure within the heart, inject contrast dye, determine valvular defects and occlusions, measure blood volume relationship to cardiac competence, diagnose congenital deformities, and obtain blood samples

Echocardiogram — Using ultrasound to visualize the heart

Electrocardiogram (EKG or ECG) — A graphic record of the electrical activity of the heart. The tracing of the energy wave can be produced on paper or displayed on a fluorescent screen. EKGs can be given while the patient is supine, ambulatory, or under stress. EKG helps to evaluate chest pain, the effects of antiarrhythmic drug therapy, and the status of patients with recent heart attack or pacemaker insertion. A cardiologist interprets the findings.

- For *ambulatory EKG*, a Holter monitor (portable EKG monitor) may be used to detect heart activity and arrhythmias while allowing the patient to be ambulatory. The patient keeps a diary during the test and records any activity, especially if associated with symptoms. The EKG tracing is recorded on tape and later compared with the patient's diary.

- *Stress testing* involves giving an EKG to a patient while exercising, usually on a treadmill.

Fluoroscopy — An x-ray that shows movement. This procedure is used to insure correct placement of a pacemaker or intracardial catheter.

Laboratory examinations

- **Arterial blood gases** — An analysis of oxygenation and acid-base balance

- **Blood cultures** — Blood cells are grown in a special medium and studied. Used to diagnose infections such as bacterial endocarditis.

- **Cardiac enzymes** — An analysis of the amount of creatine phosphokinase, lactic dehydrogenase, and serum-glutamic-oxalocetic transaminase, which are released into the bloodstream after tissue necrosis

- **Complete blood count (CBC)** — An analysis of the constituents of the blood. Hemoglobin, leukocytes, platelets, and erythrocytes are counted.

- **Serum electrolytes** — An analysis of the sodium, potassium, and calcium levels

- **Serum lipids** — An analysis of cholesterol and triglycerides

SURGICAL PROCEDURES

Anastomosis – Surgical joining of two tubular structures, such as veins or arteries.

Artificial pacemaker — A temporary or permanently-implanted device that stimulates an impulse in the heart.

Coronary artery bypass graft (CABG) — A section of blood vessel (from the saphenous vein or mammary artery) is grafted onto a coronary artery to bypass an occlusion.

Percutaneous transluminal coronary angioplasty (PTCA) — An alternative to coronary artery bypass graft surgery. Atheromatous plaque in the coronary artery is compressed by inserting and inflating a balloon.

Pericardial fenestration – Cutting an opening, or "window," in the pericardium.

Pericardial tap – Puncturing the pericardium.

Pericardiectomy – Excision of the pericardium or a section of the pericardium.

Valve replacement — Replacement of a damaged heart valve.

Valvuloplasty — Surgical repair of valve by suturing torn leaflets.

Valvulotomy — Surgical repair (cutting) of a fused or fibrous valve.

ASSIGNMENT SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: HEART

IV

Name ______________________________ Score ________

OBJECTIVE 11

Plan care for patients with diseases and disorders of the heart.

INTRODUCTION

Telemetry involves remote monitoring of the electrical activity of a patient's heart. Arrhythmias are a common complications following a myocardial infarction. Monitoring the heart's electrical activity can prevent serious complications and death. The patient may be connected to a monitor, or signals may be transmitted to a remote monitor. A nurse can watch the patient's heart pattern on the screens. If the monitor alarm sounds, signaling trouble, a nurse responds immediately.

Bill Barker is 59 years old. He is recovering from a myocardial infarction. Today he was moved from the acute area to the progressive area and placed on telemetry.

DIRECTIONS

In this assignment you are given a case study. Use it, or a patient in your clinical practice, to plan care for a patient. Care plans are essentially research projects for each of your patients. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Use the information in Objective 4 to help complete a plan of care for your patient. Your instructor will provide a care plan form for your use.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Cognitive Activities

- Collect/record information
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: HEART

ASSIGNMENT SHEET

Care plan should meet the following criteria:

- Nursing process followed
    - Assessment
    - Analysis (under direction of RN)
    - Planning
    - Implementation
    - Outcome/evaluation (under direction of RN)
- Problem stated appropriately
- Discharge planning included

JOB
SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: HEART

IV

Name ______________________________ Score __________

OBJECTIVE 12

Perform a cardiac assessment.

INTRODUCTION

The initial impression and baseline data that the nurse gathers when the patient is admitted into the hospital is valuable information for the patient's care. The assessment should be done with routine vital signs. The nurse should observe for changes and report findings to the doctor before serious complications develop.

EQUIPMENT AND SUPPLIES

- Worksheet
- Pen

PROCEDURE

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization

Functional Writing
- Complete forms and records

Functional Math
- Make measurements

Life Science
- Investigate health issues

Assessment and analysis	Yes	No
1. Check physician's orders.	____	____
2. Identify patient.	____	____
3. Observe patient's condition; chart any changes.	____	____
Planning		
1. Reassure patient and explain procedure.	____	____
2. Prepare for procedure.	____	____
Implementation		
1. Collect equipment.	____	____
2. Explain procedure to the patient as steps are performed.	____	____
3. Wash your hands.	____	____

Interactive Communications
- Communicate with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Complete job-related applications

	Yes	No
4. Take the radial pulse in each arm.	____	____
NOTE: Pulses should be the same.		
5. Note the rate, fullness, and rhythm.	____	____
6. Take the blood pressure in each arm, supine and standing (may be indicated for certain cardiac conditions).	____	____
NOTE: Readings should be the same.		
9. Take the respirations.	____	____
10. Note the rate, pattern, and depth of respirations.	____	____
11. Place a stethoscope over the patient's lungs to listen for lung sounds.	____	____
12. Place a stethoscope over the patient's heart to listen for heart sounds.	____	____
13. Note rate and rhythm.	____	____
14. Examine the patient's extremities for edema.	____	____
15. Note the location and degree.	____	____
16. Place a stethoscope over the patient's abdomen to listen for bowel sounds.	____	____
17. Observe the skin color and temperature.	____	____
18. Observe the neck veins.	____	____
19. Ask if patient experiences chest pain.	____	____
— Ask patient to describe the duration, location, and periods of intensity	____	____
— Ask what relieves or worsens pain	____	____

	Yes	No
20. Clean up:		
a. Put reusable equipment away properly.	____	____
b. Properly discard disposable materials.	____	____
c. Wash your hands.	____	____
21. Document procedure according to agency requirements.	____	____
Evaluation		
1. Recheck patient in 30 minutes.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery to the tolerances shown (). (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Performed steps in a timely manner	4	3	2	1
Used universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Used proper equipment correctly	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1

Put away equipment and cleaned work area	4	3	2	1
Documented procedure according to agency requirements	4	3	2	1
Rechecked patient in 30 minutes for comfort	4	3	2	1

EVALUATOR COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the competency profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** - Can perform job with no additional training
3 **Moderately Skilled** - Has performed job during training program; limited additional training may be required
2 **Limited Skill** - Has performed job during training program; additional training is required to develop skill
1 **Unskilled** - Is familiar with process, but is unable to perform job

JOB SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: HEART

IV

Name ______________________________ Score __________

OBJECTIVE 13

Apply cardiac monitor leads.

INTRODUCTION

Cardiac monitoring allows the nurse to continuously observe electrical activity of the patient's heart. It is useful for patients who have cardiac abnormalities or arrhythmias that can lead to life-threatening situations. The functions of cardiac monitoring are to display the patient's heart rate and rhythm, to sound an alarm if the heart rate rises above or falls below the allowable level, and to give printouts of heart rhythms.

EQUIPMENT AND SUPPLIES

- Alcohol sponges
- Cardiac monitor
- 1-5 lead wires
- Patient cable
- 1-5 pregelled electrodes
- Shaving razor

PROCEDURE

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure.	_____	_____
2. Prepare for procedure.	_____	_____

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Interactive Communications
- Communicate with clients/customers/patients

Interactive Communications

- Communicate with clients/customers/patients

Cognitive Activities

- Collect/record information
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure
- Practice good work habits/attitudes

Implementation

	Yes	No
1. Collect equipment.	____	____
2. Explain procedure to the patient.	____	____
3. Wash your hands.	____	____
4. Determine the positions of the electrodes.	____	____
5. Shave the area where the electrodes will be attached.	____	____
6. Clean the area where the electrodes will be attached using alcohol sponges.	____	____
NOTE: The removal of surface skin hair and oils will permit clearer and more accurate conduction.		
7. Remove the backing of the pregelled electrodes.	____	____
8. Attach the negative electrode on the first intercostal space on the right sternal border.	____	____
9. Attach the positive electrode on the fourth intercostal space left of the midclavical line.	____	____
10. Attach the ground electrode on the fourth intercostal space of the right sternal border.	____	____
11. Attach the wires to the electrodes.	____	____
12. Connect the wires to the telemetry unit or connect the wires to the monitor console cable.	____	____

	Yes	No
13. Adjust the monitor console to bring the pattern into focus.	____	____
14. Set the upper and lower limits of the heart rate.	____	____
15. Check the alarm system to make sure it is working.	____	____
16. Check to make sure paper is in the unit.	____	____
17. Plug unused leads into receptacles to prevent interference.	____	____
18. Clean up:		
a. Put usable equipment away properly.	____	____
b. Properly discard disposable equipment.	____	____
c. Wash your hands.	____	____
19. Document procedure according to agency requirements.	____	____

Evaluation

	Yes	No
1. Recheck patient in 30 minutes for comfort.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS ____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery to the tolerances shown (). (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Performed steps in a timely manner	4	3	2	1
Used universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Used proper equipment correctly	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1
Documented procedure according to agency requirements	4	3	2	1
Rechecked patient in 30 minutes for comfort	4	3	2	1

EVALUATOR COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the competency profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** - Can perform job with no additional training
3 **Moderately Skilled** - Has performed job during training program; limited additional training may be required
2 **Limited Skill** - Has performed job during training program; additional training is required to develop skill
1 **Unskilled** - Is familiar with process, but is unable to perform job

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: HEART

IV

Name ______________________________ Score __________

OBJECTIVE 1

Match terms associated with diseases and disorders of the heart to their correct definitions. Write the correct letter in the blank.

_____ 1. Local dilated area of a blood vessel, caused by weakening of a vessel wall

_____ 2. Inability of the heart to maintain normal or adequate circulation

_____ 3. Fluttering or throbbing sensation felt in the chest

_____ 4. An irregularity in the heart's normal sinus rhythm

_____ 5. Colorless appearance to the skin

_____ 6. The sinoatrial node (also known as the pacemaker node), source of the electrical impulse that initiates the heartbeat

_____ 7. Narrowing of blood vessels, which causes constriction

_____ 8. Soft blowing sound heard in the patient's chest that may indicate heart disease

a. aneurysm
b. arrhythmias
c. deceleration
d. decompensation
e. murmur
f. pallor
g. palpitation
h. S-A node
i. semilunar valve
j. stenosis
k. tachycardia
l. valvuloplasty

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OBJECTIVE 2 **Choose the correct word or phrase to complete statements about basic cardiac assessment.** Write the correct letter in the blank.

_____ 1. Input from family members and the patient's level of consciousness anxiety are factors to consider when assessing the patient's

a. weight
b. heart rate
c. general appearance
d. pain

_____ 2. When blood pressure is taken in both arms,

a. the dominant arm should be higher than the nondominant arm
b. both readings should be similar
c. pulse pressure should be less than 30 points
d. distended veins may be seen or felt

_____ 3. Radial pulses are taken in both arms and assessed for

a. fullness, smoothness, strength
b. duration, intensity, location
c. absence, presence, distention
d. strength, rhythm, duration

_____ 4. When assessing the patient's heart rate, evaluate for

a. presence, amount, and color
b. duration, intensity, location
c. fullness, smoothness, strength
d. rhythm, intensity, volume, and irregularity

_____ 5. The nurse should observe chest movements while assessing

a. respirations
b. heart rate
c. blood pressure
d. jugular pulse

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_____ 6. While assessing the abdomen, the nurse

a. tries to correlate with previous readings
b. observes chest movements
c. assesses rate with respirations
d. notes the contour and palpitates for bladder fullness

_____ 7. Which type of temperature is contraindicated for cardiac patients?

a. tympanic
b. rectal
c. axillary
d. oral

_____ 8. When assessing the patient's mental status, the nurse should note the patient's

a. description of location, intensity, and duration
b. level of consciousness, memory, orientation, cognition, and mood
c. regularity, depth, and pattern
d. rhythm, intensity, volume, and regularity

_____ 9. The nurse should record the patient's description of location, intensity, and duration of

a. edema
b. heart rate
c. pain
d. palpitations

_____ 10. During auscultation, the nurse observes

a. blood pressure
b. heart and lung sounds
c. pulse

d. respiration

___11. When palpating for edema, pay special attention to the

a. abdomen
b. area directly over the heart
c. neck and chest
d. sacrum, legs, ankles, feet

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_____ 12. **Which of the following should be recorded as part of a cardiac assessment?**

a. age
b. height
c. occupation
d. weight

_____ 13. When assessing the patient's sputum, you should

a. use the stethoscope to listen for lung sounds
b. note the presence, amount, and color.
c. ask what factors aggravate or alleviate the patient's sputum
d. note if the patient complains of dyspnea

_____ 14. When assessing the patient's extremities, you should

a. note the skin color and temperature
b. note if a venous pulse can be seen
c. note the contour and palpate for any pulsating masses
d. assess for fullness, smoothness, and strength

OBJECTIVE 3 **Choose the correct word or phrase to complete statements about alterations in cardiac output.** Write the correct word in the blank.

_____ 1. Difficulty breathing while lying flat is

a. dyspnea
b. apnea
c. orthopnea
d. Cheyne-Stokes

_____ 2. Pain that is not relieved by rest or nitroglycerine indicates

a. angina
b. myocardial infarction
c. pericarditis
d. anxiety

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_____ 3. Patients who do not have sufficient oxygenation may experience

a. fatigue or dizziness
b. edema
c. abdominal discomfort
d. chest palpitations

_____ 4. Localized or systemic accumulation of fluid can cause

a. edema
b. Cheyne-Stokes breathing
c. orthopnea
d. fatigue

_____ 5. Abdominal pain is assessed for

a. rhythm, volume, duration
b. duration, intensity, location
c. fullness, strength, weakness
d. regularity, depth, pattern

_____ 6. Patients with alterations in cardiac output have symptoms that include

a. weight gain, infections
b. feeding difficulties, weight loss
c. nausea, vomiting, diarrhea
d. dyspnea, chest pain

_____ 7. Symptoms of low cardiac output that affect the patient's skin include

a. dry skin
b. paresthesia
c. pallor
d. urticaria

_____ 8. Discomfort in the chest described as pounding or jumping can indicate

a. arrhythmias
b. congestive heart failure
c. orthopnea
d. aneurysm

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OBJECTIVE 4 **Choose the correct word or phrase to complete statements about coronary vascular diseases.** Write the correct letter in the blank.

_____ 1. A myocardial infarction (MI) results in

a. ischemia and death to tissues
b. left ventricular dysfunction
c. gradual blockage of coronary arteries
d. inability of the heart to function

_____ 2. Angina occurs because of

a. left ventricular failure from ischemia
b. decreased oxygen delivery from diminished blood flow
c. a sudden blockage that causes death to tissues
d. an inability of the heart muscle to pump

_____ 3. Health care management for the patient with MI includes

a. reduce the heart's workload
b. nitroglycerine
c. antibiotics
d. symptomatic relief

_____ 4. Which of the following is NOT usually associated with anginal pain?

a. extremely hot or cold temperatures
b. heavy meals
c. physical exertion
d. upper respiratory infections

_____ 5. Risk factors for coronary artery disease (CAD) include

a. hypotension
b. age, sex, and race
c. alcohol and drug use
d. rheumatic fever

_____ 6. Health care management for the patient with CAD includes

a. anti-inflammatory agents
b. coronary artery bypass graft
c. valve replacement
d. corticosteroids

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_____ 7. Signs and symptoms of MI include

a. TET spells
b. click or murmur heard on auscultation
c. nausea and vomiting
d. pain precipitated by heavy meals

_____ 8. Signs and symptoms of angina pectoris include

a. long-lasting pain that does not diminish with rest
b. pallor and diaphoresis
c. nausea and vomiting
d. pain precipitated by physical exertion

_____ 9. When implementing the plan to promote healing for a patient with MI, you would

a. assist with IPPB treatments
b. encourage early ambulation
c. administer nitroglycerin sublingualy as attack begins
d. encourage frequent small meals

OBJECTIVE 5 **Choose the correct word or phrase to complete statements about congenital disorders of the heart.** Write the correct letter in the blank.

_____ 1. An abnormal opening in the septum between the left and right atria is called

a. patent ductus arteriosus
b. aortic valvular stenosis
c. atrial septal defect
d. ventricular septal defect

_____ 2. Congenital heart diseases are caused by all the following EXCEPT

a. abnormal embryonic development
b. mother's dietary insufficiency
c. genetic factors
d. trauma

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_____ 3. An abnormal opening in the septum between the left and right ventricles is called

a. atrial septal defect
b. ventricular septal defect
c. aortic valvular stenosis
d. tetralogy of Fallot

_____ 4. The condition in which infants are usually asymptomatic, and older children experience chest pain, fatigue, and dyspnea, is

a. aortic valvular stenosis
b. patent ductus arteriosus
c. atrial septal defect
d. ventricular septal defect

_____ 5. Approximately 50% of all cases of __________ close spontaneously.

a. atrial septal defect
b. patent ductus arteriosus
c. tetralogy of Fallot
d. ventricular septal defect

_____ 6. In patients with ________, an opening that normally closes soon after birth remains open.

a. atrial septal defect
b. coarctation of the aorta
c. patent ductus arteriosus
d. tetralogy of Fallot

_____ 7. Tetralogy of Fallot consists of the following defects:

a. atrial septal defect, stenosis of the pulmonary artery, dextroposition of the aorta, and hypertrophy of the right ventricle
b. ventricular septal defect, stenosis of the pulmonary artery, dextroposition of the aorta, and hypertrophy of the right ventricle
c. patent ductus arteriosus, stenosis of the pulmonary artery, dextroposition of the aorta, and hypertrophy of the left ventricle
d. ventricular septal defect, stenosis of the pulmonary artery, dextroposition of the aorta, and hypertrophy of the left ventricle

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_____ 8. Coarctation of the aorta is characterized by

a. dextroposition of the aorta
b. narrowing or constricting of the aortic arch
c. stenosis of the aortic arch
d. aneurysm of the aorta

_____ 9. Children with Tetralogy of Fallot may experience TET spells, which consist of

a. cyanosis, pallor, irritability, blackouts, convulsions
b. nausea, vomiting, diaphoresis, cyanosis
c. hypertension in upper extremities, hypotension in lower extremities
d. fatigue, dyspnea, chest pain, dizziness

_____ 10. Health care management for patients with patent ductus arteriosus includes

a. anastomosis
b. corticosteroids
c. analgesics
d. valve replacement

_____ 11. When implementing the plan to promote healing for a patient with a congenital heart disorder, you would

a. reduce the workload on the heart
b. recommend genetic counseling for parents
c. provide low-fat, low sodium diet
d. watch for signs of digitalis toxicity

OBJECTIVE 6

Choose the correct word or phrase to complete statements about heart failure. Write the correct letter in the blank.

_____ 1. Patients with congestive heart failure may show symptoms of

a. anginal pain and edema
b. dyspnea, edema, and weakness
c. orthopnea, hypotension, and weakness
d. hypotension and edema

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_____ 2. Pulmonary edema, a life-threatening condition, often occurs because of

a. a complete blockage of the coronary arteries
b. a sudden onset of hypotension
c. acute left ventricular failure
d. inadequate oxygen exchange

Riley Mitchell is 80 years old. He was admitted to the emergency room with orthopnea. The doctor examined him, and after the x-rays were completed, admitted him to the CCU with pulmonary edema. You are Mr. Mitchell's nurse.

Questions 3-5 apply to the above situation.

_____ 3. While doing the assessment you expect to see

a. arrhythmias, anemia
b. cyanosis, edema
c. malaise, weight loss
d. low grade fever, chills

_____ 4. You will implement Riley's care plan by

a. administering vasodilators
b. encouraging him to ambulate
c. providing pre- and postoperative care
d. assisting with IPPB treatment

_____ 5. The care plan will include administering

a. diuretics
b. antibiotics
c. antipyretics
d. stool softeners

_____ 6. Cor pulmonale is heart disease resulting from

a. congenital defect
b. infection
c. lung disorder
d. trauma

_____ 7. Patients with cor pulmonale may show symptoms of

a. angina
b. carbon monoxide poisoning
c. myocardial infarction
d. alcohol poisoning

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_____ 8. Health care management for the patient with congestive heart failure includes

a. pericardial tap
b. valvuloplasty
c. well-balanced, high-calorie diet
d. reduce exertion; encourage rest

_____ 9. Health care management for the patient with cor pulmonale includes

a. encourage patient to quit smoking
b. antibiotic therapy for pharyngeal infections
c. corticosteroids
d. nitroglycerin

OBJECTIVE 7

Choose the correct word or phrase to complete statements about inflammatory and infectious diseases of the heart. Write the correct letter in the blank.

_____ 1. Rheumatic heart disease is a sequela of

a. rheumatoid arthritis
b. rheumatic fever
c. rheumatism
d. rheumatic carditis

_____ 2. Health care management for rheumatic heart disease includes

a. antibiotic therapy
b. low sodium, low purine diet
c. valvuloplasty or valve replacement
d. early ambulation

_____ 3. Pericarditis can lead to

a. heart muscle destruction
b. upper respiratory infections
c. valvular deterioration
d. compression of the heart

_____ 4. Endocarditis involves vegetative growths on the

a. arteries
b. endocardium
c. ventricles
d. valves

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_____ 5. Symptoms of endocarditis include

a. dyspnea
b. precordial pain referred to neck or shoulder
c. petechiae in conjunctiva and mouth
d. click heard on auscultation

_____ 6. Myocarditis is often secondary to

a. acute endocarditis or pericarditis
b. congenital heart disease
c. rheumatic fever
d. myocardial infarction

_____ 7. Health care management for patients with pericarditis includes

a. symptomatic treatment for joint pain
b. pericardial tap
c. valvuloplasty
d. reevaluate cardiac medications

_____ 8. Signs and symptoms of pericarditis include

a. flu-like symptoms
b. petechiae in conjunctiva and mouth
c. severe precordial pain referred to neck, shoulder, left arm
d. rapid pulse, clubbing of fingers, and anemia

_____ 9. When implementing the plan to promote healing for a patient with an inflammatory or infectious disease of the heart, you would

a. encourage frequent small meals
b. assist with IPPB treatments
c. assist with cardioversion
d. report conditions that affect electrolyte imbalance

_____ 10. The teaching plan for patients with rheumatic heart disease should include

a. advise the patient to limit fluid intake
b. discuss the need for antibiotic therapy before dental work or intrusive procedures
c. recommend genetic counseling for parents
d. teach patient to use sublingual medications

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OBJECTIVE 8

Choose the correct word or phrase to complete statements about valvular diseases and disorders. Write the correct letter in the blank.

_____ 1. A rare disorder that causes leaflets to thicken and fuse together is

a. pulmonary stenosis
b. tricuspid stenosis
c. aortic stenosis
d. mitral stenosis

_____ 2. Progressive thickening of the bicuspid leaflets of the mitral valve is

a. pulmonary stenosis
b. tricuspid stenosis
c. aortic stenosis
d. mitral stenosis

_____ 3. Mitral insufficiency causes

a. hypertrophy of the left atrium
b. failure of the left ventricle
c. congestion
d. pulmonary hypertension

_____ 4. Aortic stenosis may be caused by

a. congestive heart failure
b. neoplasms
c. rheumatic heart disease
d. trauma

_____ 5. In the patient with aortic insufficiency, the valve flaps are damaged by

a. inflammatory lesions
b. neoplasms
c. myocardial infarction
d. vegetative growths

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_____ 6. Patients with valvular diseases experience symptoms that include

- a. nausea, vomiting, anxiety, dizziness, edema
- b. edema, dyspnea, fatigue, cough
- c. congestion of the liver, fatigue, dyspnea, pallor, dizziness
- d. anemia, chest pain, arrhythmias, anorexia, malaise

_____ 7. When implementing the plan to promote healing for patients with valvular diseases and disorders, you would

- a. assist in cardioversion if necessary
- b. encourage ambulation
- c. restrict sodium intake
- d. provide small, frequent high-calorie meals

OBJECTIVE 9 **Choose the correct word or phrase to complete statements about arrhythmias.** Write the correct letter in the blank.

_____ 1. People who have enlarged hearts from strenuous exercise often have a rhythm of

- a. atrial fibrillation
- b. sinus bradycardia
- c. sinus tachycardia
- d. normal sinus

_____ 2. A regular rate above 100/minute is

- a. atrial fibrillation
- b. sinus bradycardia
- c. sinus tachycardia
- d. normal sinus

_____ 3. Which of the following arrhythmias is a medical emergency?

- a. ventricular fibrillation
- b. sinus bradycardia
- c. sinus tachycardia
- d. premature ventricular contractions

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_____ 4. If a disorganized, rapid, ineffective ventricle pattern can be seen on an EKG, the arrhythmia is called

a. premature ventricular contractions
b. sinus tachycardia
c. ventricular fibrillation
d. heart block

_____ 5. Toxic effects of drugs, infections, and structural changes from a heart attack or tumors can cause

a. ventricular fibrillation
b. sinus tachycardia
c. premature ventricular contractions
d. heart block

_____ 6. Premature ventricular contractions can significantly reduce cardiac output, and lead to

a. ventricular fibrillation
b. atrial fibrillation
c. sinus tachycardia
d. heart block

_____ 7. The care plan for a patient admitted into the CCU with heart arrhythmias should include all the following EXCEPT

a. applying rotating tourniquets
b. administering prescribed medications
c. monitoring and assessing EKGs
d. providing care for pacemaker insertion

NOTE: Objectives 10-12 are evaluated on Job Sheets/Assignment Sheet in this unit. If you have not completed these components, see your instructor.

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WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: HEART

IV

OBJECTIVE 1

1. a
2. d
3. g
4. b
5. f
6. h
7. j
8. e

OBJECTIVE 2

1. c
2. b
3. a
4. d
5. a
6. d
7. b
8. b
9. c
10. b
11. d
12. d
13. b
14. a

OBJECTIVE 3

1. c
2. b
3. a
4. a
5. b
6. d
7. c
8. a

OBJECTIVE 4

1. a
2. b
3. a
4. d
5. b
6. b
7. c
8. d
9. a

OBJECTIVE 5

1. c
2. d
3. b
4. a
5. d
6. c
7. b
8. b
9. a
10. c
11. a

OBJECTIVE 6

1. b
2. c
3. b
4. d
5. a
6. c
7. b
8. d
9. a

OBJECTIVE 7

1. b
2. a
3. d
4. d
5. c
6. a
7. b
8. c
9. a
10. b

OBJECTIVE 8

1. b
2. d
3. a
4. c
5. a
6. b
7. c

OBJECTIVE 9

1. b
2. c
3. a
4. c
5. d
6. a
7. a

OBJECTIVE SHEET

APPLYING THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: BLOOD VESSELS

V

INTRODUCTION

The vascular system consists of valves, arteries, veins, capillaries, arterioles, and venules. Blood flows to all parts of the body through the vessels. Valves regulate blood flow and direction. Arteries are thick-walled, muscular vessels that carry oxygenated blood from the heart to tissues. Veins are thinner-walled, less muscular vessels that carry deoxygenated blood from tissues to the heart. Capillaries, located in tissues, connect arteries to veins. Arterioles and venules connect arteries and veins to capillaries. Unless abnormalities occur, the normal pressure in this system does not change.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the cardiovascular system vessels and associated nursing processes. In addition, you will demonstrate these competencies by completing Assignment Sheets, a Job Sheet, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the vessels to their correct definitions.
2. Choose the correct word or phrase to complete statements about basic peripheral vascular assessment.
3. Choose the correct word or phrase to complete statements about hypertension.
4. Choose the correct word or phrase to complete statements about diseases and disorders of the arteries.
5. Choose the correct word or phrase to complete statements about disorders of the veins.
6. Choose the correct word or phrase to complete statements about aneurysms.
7. Choose the correct word or phrase to complete statements about disorders of the lymphatic system.

8. Choose the correct word or phrase to complete statements about the nursing process for pediatric patients with diseases and disorders of the peripheral blood vessels.

9. Plan care for the patient with hypertension. (Assignment Sheet 1)

10. Plan care for the patient with peripheral vascular disorders. (Assignment Sheet 2)

11. Perform a peripheral vascular assessment. (Job Sheet)

APPLYING THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: BLOOD VESSELS V

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objective 1, basic information that supports the rest of the unit;

  Part 2 — Objectives 2 and 3, the first two groupings, including basic peripheral vascular assessment and hypotension;

  Part 3 — Objectives 4 and 5, the next two groupings, including diseases and disorders of the arteries and veins; and

  Part 4 — Objectives 6-8, the next three groupings, including aneurysms, disorders of the lymphatic system, and pediatric patients.
- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a guest speaker to discuss diseases and disorders of the vascular system.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.
- Obtain models and large pictures of the vascular system.
- Make a poster of the vascular system.
- Make a bulletin board showing the vascular system.

- Devise games and/or crossword puzzles to reinforce terms or groupings.
- **HOSA** Integration
  - Assist students in conducting a chapter service project on diseases and disorders of the vascular system.
  - Develop objectives for service project and identify a theme.
  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.
  - Plan a community or school health project that involves disseminating pamphlets about care of patients with diseases and disorders of the vascular system.
- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.
- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the vessels to their correct definitions.

- Discuss terms associated with the vascular system.
- Have students play reinforcement games and work crossword puzzles using terms.
- Have a spelling bee using terms associated with this unit.
- Review scientific and lay terms.
- Remind students that lay people may react to medical jargon they do not understand. "Hyperlipidemia," for example, can frighten lay persons who do not know its medical use. Discuss possible lay responses to terms used.

Objective 2: Choose the correct word or phrase to complete statements about basic peripheral vascular assessment.

- Review the process of peripheral vascular assessment.

- Have students share ideas that might be helpful in doing a complete peripheral vascular assessment.
- Stress that students will use the information in this section to complete the Job Sheet.
- Discuss appropriate diagnostic tests and lab values.
- Review the structures of the vascular system.
- Have students suggest methods to make the patient more comfortable. Have them consider likely patient age and condition, whether or not treatment is painful, and the effects of medications and examinations.
- Review the involvement of other systems and the effect of vascular problems on them.

Objective 3: Choose the correct word or phrase to complete statements about hypertension.

- Have students share relevant incidents about friends or family members who have problems related to hypertension.
- Discuss appropriate diagnostic tests and lab values.
- Review current periodicals, checking popular magazines for correct information and medical journals for new research.
- Have students compare their own diet and habits to those of their parents and discuss the reason for differences.
- Have students complete Assignment Sheet 1.

Objective 4: Choose the correct word or phrase to complete statements about diseases and disorders of the arteries.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the arteries.
- Discuss appropriate diagnostic tests and lab values.
- Review the functions of the circulatory system, particularly arteries. Point out the most frequent locations of arterial disorders and have students suggest why these areas are vulnerable.
- Compare and contrast arterial disorders, noting similarities and differences.

- Discuss the role of the following on habits leading to arterial disorders: fashion, television, time demands on modern families.

- Ask students to group and identify overlapping symptoms, i.e., chest pain could be caused by pulmonary or cardiac factors.

- Discuss other diseases and disorders not mentioned in this unit.

Objective 5: Choose the correct word or phrase to complete statements about disorders of the veins.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the veins.

- Discuss appropriate diagnostic tests and lab values.

- Compare and contrast the functions of arteries and veins.

- Compare and contrast arterial and venous disorders, their appearances, and their treatments.

- Explain to students that venous disorders are treated in various ways, depending upon the clinic or physician. Discuss common treatments, the benefits and drawbacks of each.

- Have students complete Assignment Sheet 2.

- Discuss other diseases and disorders not mentioned in this unit.

Objective 6: Choose the correct word or phrase to complete statements about aneurysms.

- Have students share relevant incidents about friends or family members who have problems related to aneurysms.

- Discuss appropriate diagnostic tests and lab values.

- Discuss other diseases and disorders not mentioned in this unit.

- Compare and contrast the effects of and treatment for different types for aneurysms.

Objective 7: Choose the correct word or phrase to complete statements about disorders of the lymphatic system.

- Have students share relevant incidents about friends or family members who have problems related to disorders of the lymphatic system.
- Discuss appropriate diagnostic tests and lab values.
- Discuss other diseases and disorders not mentioned in this unit.
- Discuss patient comfort during radiation and chemotherapy.
- Discuss nursing care for the family and its importance.
- Discuss how the prospect of a long recuperative period affects patient attitude and nursing care.

Objective 8: Choose the correct word or phrase to complete statements about the nursing process for pediatric patients with diseases and disorders of peripheral blood vessels.

- Discuss differences in patient care when dealing with pediatric patients.
- Have students share relevant incidents about friends or family members who have problems related to pediatric disorders of the circulatory system and blood vessels.

APPLICATION

- Make a video or skit having to do with patient care of a person with problems associated with the heart. Either the students or the teachers can be the presenters.
- Students can practice care of the patient with problems associated with this unit.
- Have students present a one-minute speech on care of a patient with problems associated with the blood vessels.

Objective 9: Plan care for the patient with hypertension. (Assignment Sheet 1)

- Use Assignment Sheet 1 to give students an opportunity to practice ideas that will help when they care for a patient with hypertension.
- Provide a care plan form for students' use.

Objective 10: Plan care for the patient with peripheral vascular disorders. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give students an opportunity to practice ideas that will help when they care for a patient with peripheral vascular diseases and disorders.
- Provide a care plan form for students' use.

Objective 11: Perform a peripheral vascular assessment. (Job Sheet)

- Use the Job Sheet to give students hands-on experience in performing a peripheral vascular assessment.
- Use a mannequin to practice and demonstrate procedures in the classroom.

EVALUATION

Pretest

- Give Written Test as pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.
- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.
- Complete appropriate sections of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.
- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *American Institute for Cancer Research Newsletter*, 1759 R. Street, N.W., Washington, D.C. 20009
- *University of California Berkeley Wellness Letter*, 48 Shattuck Square, Suite 43, Berkeley, Ca. 94704-1140.
- *Tufts University Diet and Nutrition Letter*, 53 Park Place, New York, N.Y. 10007.

UNIT REFERENCES

- Betz, Cecily Lynn, and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *Textbook of Medical-Surgical Nursing* (5th ed.). Philadelphia: J.B. Lippincott Co., 1984.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St. Louis: Mosby Year-Book, Inc., 1991.

- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.

- *OK Diet Manual* (8th ed.). Oklahoma Dietetic Association, 1987.

- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.

- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row. 1986.

- Yannes-Eyles, Mary, *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C. V. Mosby Company, 1990.

INFORMATION SHEET

APPLYING THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: BLOOD VESSELS

V

OBJECTIVE 1

Match terms associated with diseases and disorders of the vessels to their correct definitions.

- **blanching** — Skin turns pale when pressure is applied; used to test circulation
- **bruits** — Venous or arterial sounds heard during auscultation
- **embolus** — A mass of tissue, fat, air bubbles, foreign objects, or bacteria that moves from its place of origin and obstructs blood vessels
- **Homan's sign** – Pain in the calf when toes are dorsiflexed; a sign of thrombosis
- **hyperlipidemia** — An excessive amount of lipids (fat) in the blood
- **hypertension** — Persistent high blood pressure; the systolic pressure is sustained above 140 and the diastolic is sustained above 90
- **intermittent claudication** — Severe calf pain when walking or standing that subsides with rest; caused by poor blood supply
- **orthostatic hypotension** – abnormally low blood pressure when moving to an erect position
- **phlebitis**– Venous inflammation
- **stepped program** — A treatment plan with increasing or decreasing therapy intensity
- **thrombus** — A stationary blood clot that obstructs vessels
- **tinnitus** — Ringing in the ears
- **venous stasis** — A stagnation or lack of blood flow in the veins

OBJECTIVE 2

Choose the correct word or phrase to complete statements about basic peripheral vascular assessment.

- **Pain** — The duration and intensity of pain and its relationship to exercise and rest are significant. A temporary loss of circulation is evident if cramping occurs after exercising (intermittent claudication). If pain occurs at rest, severe ischemia is evident.

  The location of pain is significant. If patients experience pain in the thigh, the occlusion is in the pelvic arteries, if the pain is in the calf, the occlusion is in the femoral artery.

- **Skin color and temperature** — The skin is usually warm and pink. Coolness indicates a decreased blood supply, whereas warmth indicates an increased blood supply.

  Skin color indicates the following:

  - **Pallor** (pale color) – possible presence of an obstruction
  - **Rubor** (red color) – possible injury
  - **Cyanosis** (blue color) – possible slow blood supply

  Patients feel uncomfortable with these conditions. To note the difference, extremities are compared to each other.

- **Pulse** — The quality, absence, or presence of a pulse is important when determining peripheral status. Peripheral pulses are located at the thumb-side of the inner wrist (radial), at the inner aspect of the thigh (femoral), behind the knee bone (popliteal), at the inner and outer aspect above the ankle bone (posterior tibial), and on the instep (dorsalis pedis).

- **Capillary refill** — The nurse presses on the patient's nailbed until the skin blanches, then releases the pressure. The duration between blanching and the original color returning is capillary refill time. Normally, color returns within 3 seconds.

- **Trophic changes** — Occur when the nourishment normally supplied via the circulatory system does not reach affected tissue. Frequent trophic changes include skin discoloration, dryness, or lesions; dry, brittle hair; and thickened, opaque, or brittle nails.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about hypertension.

Description and etiology

Primary hypertension (also called *essential hypertension*)–Persistent high blood pressure from no apparent medical cause. When this disease persists, the body's organs are damaged from lack of blood supply. It begins with intermittent episodes, then progresses to a stable situation. The disease is genetic, but stimulation with coffee, tobacco, and certain drugs are related factors because they cause small vessels to constrict. Women 30 to 50 years old are more often affected. Ninety percent of hypertensive patients have primary hypertension.

NOTE: It has been estimated that 50% of hypertensive Americans have not been diagnosed.

Risk factors

- Familial tendency
- Abnormal sodium/water retention
- Obesity
- Smoking
- Emotional disturbances
- High cholesterol/triglyceride levels
- Increased sensitivity to renin-angiotensin system

Health care management

- Diet modification and weight control
- Exercise
- Stress reduction
- Smoking cessation
- Medications: diuretics, vasodilators, antihypertensives

  NOTE: Drugs are normally prescribed in a stepped program.

- Complications: heart failure, stroke, kidney failure, aneurysm formation

ASSESSMENT

Signs and symptoms

Primary hypertension

- Frequently asymptomatic

- Headache (usually in the occipital region and usually occurring in the morning)
- Vertigo
- Flushed facial appearance
- Blurred vision
- Nocturia
- Nosebleeds

Description and etiology

Secondary hypertension – Persistent high blood pressure associated with other diseases such as aortic stenosis, renal disease, endocrine disorders, atherosclerosis, and toxemia. It usually begins in the third decade of life, most often affecting men. Related factors include smoking, heredity, and high salt intake.

Causes

- Aortic coarctation
- Chronic glomerulonephritis
- Collagen disease
- Cushing's disease
- Diabetes
- Drug effect
- IICP (increased intracranial pressure) caused by trauma or tumors
- Pheochromocytoma
- Thyrotoxicosis
- Toxemia during pregnancy

Health care management

- Diet modification and weight control
- Exercise
- Stress reduction
- Smoking cessation

- Treat underlying condition
- Medications: diuretics, vasodilators, antihypertensives

  NOTE: Drugs are normally prescribed in a stepped program.
- Complications: heart failure, stroke, kidney failure, aneurysm formation

ASSESSMENT

Secondary hypertension

Signs and symptoms

- Same as primary hypertension
- Additional signs and symptoms may be caused by underlying disease or disorder:
  - Chest pain
  - Confusion
  - Drowsiness
  - Dyspnea
  - Edema of the legs
  - Nausea and vomiting
  - Numb or tingling limbs
  - Orthopnea

Description and etiology

Malignant hypertension (also called *accelerated hypertension*) – Severe, rapidly progressive hypertension. If untreated or unsuccessfully treated, it leads to fatal changes in the kidney, heart, or brain. It is most frequently found in African-American men under 40.

Causes

- Unknown

Health care management

- Hospitalization is usually required
- Gradually decrease blood pressure through medications and other prescribed treatments.

  NOTE: The patient's system may not tolerate rapid blood pressure reduction. Wide or sudden variations in blood pressure must be avoided.
- Monitor I and O
- Treatment for related conditions such as convulsions, neurologic disorders, severe headache in the occipital lobe, and pulmonary edema

ASSESSMENT	**Signs and symptoms**
Malignant hypertension	• Severe headaches • Retinal hemorrhages • Tingling, paralysis, or numbness in the extremities • Stiffness of the neck • Complications: transient ischemic attacks (TIA), coma, cerebral, myocardial, or renal ischemia
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

HYPERTENSION

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with treatments and diagnostic tests, as needed • Administer anti-hypertensives, analgesics, and other prescribed medications • Provide diet low in sodium, fat, and cholesterol; restrict caloric intake, if necessary
• Continually monitor patient's condition	• Monitor vital signs, I/O • Take blood pressure and pulse sitting, standing, and supine • Weigh patient daily • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Stress the need to avoid smoking and caffeine — Instruct patient in appropriate dietary guidelines — Encourage patient to participate in appropriate exercise program — Discuss stress reduction techniques

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes
- Assess vital signs again, report any changes
- Contribute to plan of care update.

OBJECTIVE 4

Choose the correct word or phrase to complete statements about diseases and disorders of the arteries.

Description and etiology

Arterial embolism or thrombus – A blood clot or mass of matter that blocks vessels and inhibits blood flow. A thrombus is a stationary obstruction. If the mass becomes mobile, it is called an embolism. The obstruction can be carried to and lodge in any vessel smaller than itself. Tissue death or damage can occur.

Causes

- Air bubble
- Fat globule
- Infection

Health care management

- Bed rest
- Application of warm moist heat
- Elevation of the affected limb
- Medications: anticoagulants, fibrinolytics
- Surgeries: embolectomy

ASSESSMENT

Signs and symptoms

Arterial embolism or thrombus

NOTE: Signs and symptoms vary based on the location of the obstruction

- Sudden pain, numbness, coldness
- Chest pain
- Shock-like symptoms
- Pallor or cyanosis
- Shortness of breath
- Muscular weakness
- Pain and burning distal to occlusion

- Weak or absent pulses distal to occlusion
- Decreased level of consciousness
- Gangrene of the digits
- Blood in urine or saliva

Description and etiology

Arteriosclerosis – Chronic, insidious, progressive, disease in which the vessels lose elasticity, gradually harden, and obstruct blood flow. The femoral and carotid arteries are most often affected. Arteriosclerosis is a leading cause of death in America, but is preventable or controllable in most cases.

Risk factors

- Diabetes mellitus
- Age (over 30)
- Gender (more common in men)
- Hypertension
- High serum cholesterol
- Obesity
- Smoking
- Lack of physical activity
- Stress
- Familial tendency

Health care management

- Behavior modification: smoking cessation, diet modification, regular exercise and weight loss
- Treatment of hyperlipidemia
- Medications: vasodilators, antilipidemics

ASSESSMENT

Arteriosclerosis

Signs and symptoms

- Bruits
- Burning pain, especially when at rest

- Cold skin temperature
- Dry, shiny skin
- Gangrene or ulceration of digits
- Hair loss on extremities
- Intermittent claudication
- Clubbing of fingers and toes
- Numbness and/or tingling in extremities
- Reduced or absent arterial pulses distal to blockage
- Skin color changes: pallor, cyanosis, or rubor

Description and etiology

Atherosclerosis – Chronic, insidious, progressive form of arteriosclerosis primarily affecting the aorta and large or medium arteries. Plaque consisting of lipids, calcium, carbohydrates, blood components, and fibrous tissue gradually form in the lumen of vessels and obstruct blood flow.

Risk factors

- Decreased estrogen levels
- Diabetes mellitus
- Age (over 30)
- Gender (more common in men)
- Hypertension
- High serum cholesterol
- Obesity
- Smoking
- Lack of physical activity
- Stress
- Familial tendency

Health care management

- Diet modification
- Smoking cessation
- Exercise and weight reduction
- Control of related disorders such as diabetes and hypertension
- Medications: vasodilators, antilipidemics
- Surgeries: angioplasty, bypass or removal of occlusion, lumbar sympathectomy, atherectomy, endarterectomy

ASSESSMENT **Signs and symptoms**

Atherosclerosis

NOTE: Signs and symptoms vary according to the site and degree of obstruction

- Patients may be asymptomatic for long periods (as long as 20-40 years)
- Pain in lower limbs after exercise

Description and etiology

Raynaud's disease – Spasmodic constriction of arteries that supply the extremities. The fingers are affected more often than the toes. Women with collagen diseases are most commonly affected.

Causes

- Unknown (familial tendency, smoking, exposure to cold, and emotional tension may be factors)

Health care management

- Keep extremities warm and dry
- Smoking cessation
- Medications: calcium antagonists, vascular smooth muscle relaxants, vasodilators
- Surgeries: sympathectomy, amputation (in severe cases)
- Complications: hypertension

ASSESSMENT **Signs and symptoms**

Raynaud's disease

- Pallor, cyanosis, coldness, numbness, and pain in the digits, followed by redness, tingling, and throbbing

- Ulcerations on fingers
- Chronically cold extremities

Description and etiology

Buerger's disease (*thromboangiitis obliterans*) – A recurring inflammation of the arteries causing an obstruction that affects primarily the lower extremities. The cause is unknown.

Risk factors

- Familial tendency
- Smoking
- Age (more common in middle age)
- Gender (more common in men)

Health care management

- Smoking cessation
- Keep patient warm
- Protect hands and feet from injury
- Proper nail and skin care
- Surgeries: amputation (in severe cases)
- Complications: gangrene, intermittent claudication

ASSESSMENT

Buerger's disease

Signs and symptoms

- Sensitivity to cold temperatures
- Pain in digits when resting
- Digital rubor or pallor
- Numb and tingling extremities
- Reduced or missing distal pulses

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ARTERIAL DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with treatments and diagnostic tests, as needed • Administer medications • Provide diet low in fat and cholesterol, restrict caloric intake if necessary • Provide warm, moist heat, elevation, elastic bandages, and other comfort aids • Keep patient warm
• Continually monitor patient's condition	• Monitor vital signs, I/O • Palpate peripheral pulses • Observe skin color and temperature
• Plan for patient's discharge	• Prepare teaching plan — Advise patient to avoid smoking and caffeine — Instruct patient in appropriate dietary guidelines — Encourage patient to participate in appropriate exercise program — Discuss stress reduction techniques

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 5 **Choose the correct word or phrase to complete statements about disorders of the veins.**

Description and etiology

Phlebitis – Inflammation of the walls of the veins.

Causes

- Stasis
  - Pregnancy and childbirth
  - Surgery
  - Extended bedrest
  - Sitting for prolonged periods
- Vessel wall injury
  - IV use
  - Catheterization
  - Tumor
  - Aneurysm
- Hypercoagulability

Health care management

- Bedrest
- Applications of moist heat
- Elevation
- Antiembolism devices
- Medications: anticoagulants, analgesics
- Surgeries: embolectomy

ASSESSMENT **Signs and symptoms**

Phlebitis

- Pain or tenderness along the vein
- Edema
- Rubor
- Rapid pulse
- Painful joints
- Elevated temperature

Description and etiology

Thrombophlebitis – Inflammation of the veins associated with the formation of one or many clots. Thrombophlebitis occurs with increasing frequency as age advances and is more likely in women than men. It is frequently associated with recent surgery, especially pelvis surgery.

Causes

- Venous stasis or pooling from poor circulation and pressure due to prolonged standing, pregnancy, or inactivity

Health care management

- Bed rest
- Elevation of extremity
- Application of moist heat
- Medications: anticoagulants, anti-inflammatories, fibrinolytics
- Surgeries: embolectomy, thrombectomy, endarterectomy, venous grafts
- Complications: dislodged embolies may lodge in a vessel

ASSESSMENT

Signs and symptoms

Thrombophlebitis

- Localized pain
- Swelling of affected extremity
- Warmth and rubor along vein
- Edema
- Positive Homan's sign

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

INFLAMMATORY DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with treatments and diagnostic tests as needed • Administer medications • Encourage patient to elevate extremities • Encourage patient to wear supportive stockings • Assist with pre-and post-operative care, if ordered • Apply moist heat • Encourage bedrest

• Continually monitor patient's condition	• Monitor vital signs, I/O • Measure circumference of affected extremity and compare to circumference of unaffected extremity • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Encourage patient to participate in appropriate exercise program — Advise patient to avoid smoking and caffeine — Instruct patient to avoid standing for long periods and to change positions often — Instruct patient to keep feet elevated when possible and avoid pressure in the popliteal area — Caution patient not to massage or rub legs

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NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology	**Varicose veins** – Chronic, progressive disease resulting in tortuous, distended veins. Weakened valves and dilated veins lose elasticity, causing pressure in lower extremities, the blood pools and does not return to the heart. Hemorrhoids are varicose veins in the rectal area.
Causes	• Obesity • Pregnancy • Prolonged standing • Familial tendency
Health care management	• Elevation • Use of antiembolism stockings • Weight reduction

- Avoid standing for long periods of time
- Surgeries: sclerosing injection, vein ligation, ligation and stripping
- Complications: edema and pain, hemorrhage, skin ulcerations, infection

ASSESSMENT

Varicose veins

Signs and symptoms

- Appearance of large, discolored tortuous veins, usually in the legs
- Leg fatigue
- Leg cramps
- A feeling of heaviness in the legs
- Increased menstrual pain
- Nocturnal leg cramps

Description and etiology

Stasis ulcers – Breakdown of skin, progressing from simple loss of skin integrity to deep, open sores. Obstruction of veins leads to chronic inflammation and vascular insufficiency.

Risk factors

- Pregnancy
- Abdominal tumors
- Burns
- Sickle cell anemia
- Diabetes mellitus
- Prolonged bedrest or immobility
- Familial tendency

Health care management

- Elevation of affected part
- Bedrest
- Proper cleansing techniques and foot care

	• Exercise • Application of sterile bandages • Whirlpool baths • Medications: vitamin and protein supplements, analgesics, debriding agents, topical enzyme preparations • Surgeries: grafts, debridement • Complications: infection
ASSESSMENT	**Signs and symptoms**
Stasis ulcers	**NOTE:** Signs and symptoms vary according to stage of development • Pain
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

POOLING DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with treatments and diagnostic tests as needed • Administer medications • Encourage patient to elevate extremities • Encourage patient to wear supportive stockings • Assist with pre- and post-operative care, if ordered • Apply moist heat • Encourage bedrest
• Continually monitor patient's condition	• Monitor vital signs, I/O • Assess lesion, including size and depth • Observe for complications

• Plan for patient's discharge	• Prepare teaching plan — Advise patient to avoid smoking and caffeine — Instruct patient in appropriate dietary guidelines — Encourage patient to participate in appropriate exercise program — Caution patient not to massage or rub legs

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NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about aneurysms.

Aneurysms occur when the walls of a blood vessel become weakened. The walls stretch and bulge outward. Symptomology and damage depend upon the size, type, and location of the aneurysm. Aneurysms are classified as *fusiform* (the bulge surrounds the vessel), *saccular* (the bulge is to one side of the vessel), and *dissecting* (the bulge is between the inner and outer walls of the vessel).

NOTE: Surgery is the only medical resolution for cranial aneurysms.

Description and etiology

Cranial aneurysm – Aneurysm of the brain. Pressure from the aneurysm can displace and harm brain tissue. Cranial aneurysms are most frequently located in the anterior portion of the Circle of Willis, in the middle cerebral artery, the anterior communicating artery, or the vertebral-basilar artery system.

Causes

- Congenital (Berry aneurysm)
- Atherosclerosis (fusiform aneurysm)
- Necrotic vasculitis at the site of septic emboli (mycotic aneurysm)
- Trauma

Health care management

- Angiography (to locate the aneurysm) followed by surgery
- Maintaining a quiet, dark, restful environment for the patient
- Avoiding caffeine
- Medications: sedatives, analgesics, antifibronolytics, stool softeners, antihypertensives, steroids, anticonvulsants
- Surgeries: craniotomy, ligation and application of arterial clamp, encasement in a supportive material, arterial bypass

ASSESSMENT

Cranial aneurysm

Signs and symptoms

- Neck rigidity
- Intolerance of light
- Nausea, vomiting
- Loss of consciousness
- Convulsions
- Respiratory distress
- Shock
- Complications: neurologic disorders, headache, rupture (indicated by deficits), fluid and electrolyte level disturbances, narrowed cerebral blood vessels (leading to reduced blood flow, ischemia, and cerebral infarction), intracerebral or subdural hematoma, hydrocephaly, brain edema, pituitary insufficiency

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Description and etiology

Thoracic aneurysm – Like abdominal aneurysms, thoracic aneurysms can be asymptomatic. Pain that does present is probably due to pressure on tissues and structures surrounding the aneurysm.

Risk factors

- Hypertension
- Gender (more common in men)
- Age (more common over 40)

Health care management

- Surgeries: grafting
- Complications: rupture

ASSESSMENT

Signs and symptoms

Thoracic aneurysm

- Patients are asymptomatic initially
- Pulsating mass located in the chest
- Constant boring pain and pressure or intermittent neuralgic pain
- Dyspnea
- Coughing
- Dysphagia
- Cyanosis, especially in the upper torso
- Asymmetrical radial pulse

Description and etiology

Abdominal aneurysm – Abdominal aortic aneurysms are usually located in the abdominal aorta below the renal arteries. They can spread to involve the renal, iliac, or mesenteric arteries. Abdominal aneurysms can be difficult to diagnose. Many are asymptomatic; others first become evident when the patient suffers severe chest pain that is easily mistaken for myocardial infarction. If rupture occurs, morbidity is extremely high. Abdominal aneurysms occur most frequently in men over 60.

Causes

- Infection
- Congenital vessel weakness
- Arteriosclerosis
- Syphilis
- Trauma

Health care management

- Maintain a quiet, dark, restful environment
- Avoid caffeine

	• Medications: sedatives, analgesics, antifibronolytics, stool softeners, antihypertensives, anti-inflammatories
	• Surgeries: grafting
	• Complications: rupture
ASSESSMENT	**Signs and symptoms**
Abdominal aneurysm	• Patient may be asymptomatic • Intermittent or persistent localized pain at midline or left of midline • Low back pain • Pulsating abdominal mass • Cyanosis of torso or legs
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

ANEURYSMS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with treatments and diagnostic tests as needed • Administer medications • Assist with pre- and post-operative care • Provide a quiet, restful environment
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Advise patient to avoid smoking and caffeine — Encourage patient to participate in an appropriate exercise program — Discuss stress reduction techniques

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 7

Choose the correct word or phrase to complete statements about disorders of the lymphatic system.

Description and etiology

Lymphangitis – Inflammation of the lymph vessels.

Causes

- Infection (usually *streptococcus*)

Health care management

- Elevation of the affected area
- Patient rest
- Application of moist heat
- Medication: antibiotics
- Surgeries: incision and draining of abscesses
- Complications: septicemia, abscesses

ASSESSMENT

Signs and symptoms

Lymphangitis

- Red streaks in the arm or leg leading from a non-localized infection
- High fever
- Chills
- Localized pain
- Tenderness
- Swelling, tenderness, and rubor associated with involved lymphatics

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

LYMPHANGITIS

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions
Check medication record	
Collect equipment	
Promote healing	Assist with treatments and diagnostic tests as needed Administer medications Elevate affected area Encourage patient to rest
Continually monitor patient's condition	Monitor vital signs, I/O Assess inflammatory site Observe for complications
Plan for patient's discharge	Prepare teaching plan — Instruct patient to wear supportive stockings — Encourage patient to participate in appropriate exercise program

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Lymphoma — A neoplastic disease of the lymph system. Lymphomas are classified as either Hodgkin's disease or non-Hodgkin's lymphoma according to the type of malignant cells predominant and the degree of cell differentiation.

- **Hodgkin's disease** is a malignant disease of the lymph nodes. It involves enlargement of the lymph nodes with eventual metastasis to lymph tissue, spleen, and liver. Radiation and chemotherapy treatments make it possible for some patients to remain remission for many years.

- **Non-Hodgkin's lymphoma** is a term used to describe any of a group of various lymphomas.

Causes

- Unknown

Health care management

- Radiation therapy
- Chemotherapy

  NOTE: Most nursing care centers on relieving patient discomfort from chemotherapy, radiation therapy, and other treatments.

- Encourage patient to eat by offering soft, palatable food

  NOTE: Anorexia, nausea, and esophagitis are common responses to treatment.

- Patient education and support during treatments
- Medications: antineoplastics, antidiarrheals, stool softeners, analgesics
- Surgeries: staging laparotomy

  NOTE: Most nursing care centers on relieving patient discomfort from chemotherapy, radiation therapy, and other treatments.

- Complications: infection, anemia

ASSESSMENT

Lymphomas

Signs and symptoms

NOTE: Symptoms will vary based on the location of the affected lymph node

- Painless lymph node swelling
- Fever
- Weight loss
- Sweating
- Pruritus

- Fatigue
- Abdominal distention
- Respiratory symptoms, including mediastinal lymphoma, pulmonary parenchyma, and pleura

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

LYMPHOMAS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with treatments and diagnostic tests as needed • Administer medications • Encourage the patient to eat • Assist in pre- and post-operative care • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for hospitalized patient's discharge	• Instruct patient about treatments and results • Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 8

Choose the correct word or phrase to complete statements about the nursing process for pediatric patients with diseases and disorders of the peripheral blood vessels.

Description and etiology

Hypertension – Though hypertension is unusual in children, it can be caused by renal, congenital, vascular, or endocrine disorders. Hypertension may be genetically predetermined. It is more common in Americans than in other nationalities; and more common in African-Americans than Caucasians.

Causes

- Renal disorders
- Vascular disorders
- Endocrine disorders
- Use of indwelling artery catheter
- Congenital heart defect
- Hypoxia

Health care management

- Diet modification
- Treat underlying cause
- Exercise (as appropriate)
- Medication: diuretics, antihypertensives

ASSESSMENT

Signs and symptoms

Systemic hypertension

- Many patients are asymptomatic
- Headaches
- Vision problems and dizziness
- Behavior disorders (head-banging, irritability, night terrors)

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HYPERTENSION

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with treatments and diagnostic tests as needed • Administer medications
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Advise the patient and parents about proper dietary guidelines — Advise the patient and parents about proper exercise program

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

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DIAGNOSTIC PROCEDURES

Cold stimulation test – Used to diagnose Raynaud's disease. Thermistors are attached to the patient's hand. The hand is immersed in cold water. Temperature changes are recorded.

Digital subtraction angiography – Used to visualize the vascular system and flow patterns, including blockages, aneurysms, and abnormalities. Contrast medium is injected in the arterial system and the progress of the medium is displayed on a television monitor.

Doppler ultrasonography – Used to measure the efficiency of arterial circulation, blood flow, and bypasses. A conductive jelly is applied to the skin; sound waves are sent through the tissue and readings recorded in graph form.

Electrocardiogram (ECG) – Used to determine cardiac patterns and efficiency.

Exercise testing – Used to test circulatory efficiency. Patient performs controlled exercise. Pulse and pressure readings are compared to baseline.

Impedance plethysmography – Used to measure venous volume and diagnose thrombosis. Pressure cuff and electrodes are attached to the patient's limb and readings made.

Lymphangiography – Used to determine lymphatic involvement. Radiopaque dye in injected in the lymph system and radiographic series taken.

Peripheral vascular arteriography – Used to visualize the vascular system and flow patterns, including blockages, aneurysms, and abnormalities. Radiopaque dye is injected in the arterial system and radiographic series are taken.

Pulse volume recordings – Used to assess circulatory efficiency in extremities. Pressure cuffs and a pressure transducer record changes.

Segmental limb pressure – Used to index arterial occlusion. Pressure cuffs and a Doppler probe measure systolic readings for each limb.

Trendelenburg's test – Used to diagnose venous fill times. A tourniquet is applied to the patient's limb, fill time recorded, the tourniquet is removed and fill time is again recorded.

Urinalysis, CBC, serum electrolyte – Used to determine disease severity and diagnose hypertension causes.

Venography – Used to assess deep vein condition. Radiopaque dye is injected in deep veins via a catheter and radiographic series are taken.

X-ray – Used to visualize size and condition of affected organs

SURGICAL PROCEDURES

Amputation – removing a diseased extremity or digit

Anastomosis – surgically forming a passage between two structures which are usually distinct, as between a vein and an artery

Angioplasty – reshaping in inner walls of blood vessels by use of balloon-tipped catheter. The balloon is inserted into the vessel, inflated to widen the passageway, then deflated for movement or removal.

Bypass – forming a new circulatory passage to replace a blocked or diseased passage

Cardiac catheterization – inserting a catheter into the heart via a vein in the arm. The catheter can be used to obtain samples or test interior cardiac pressure.

Craniotomy – opening the skull

Embolectomy – removing an embolism

Endarterectomy – removing emboli and stripping the blood vessel of plaque build-up along the inner vessel wall

Laparotomy – surgically opening the abdomen

Sternotomy – surgical removal of a diseased extremity or digit

Sympathectomy – removing or destroying nerve ending

Thrombectomy – removing a thrombus

Venous grafting – replacing sections of blood vessels with sections from other vessels or with artificial materials

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ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: BLOOD VESSELS

V

Name ________________________________ Score ________

OBJECTIVE 9

Plan care for the patient with hypertension.

INTRODUCTION

Hypertension is a general term used to describe any condition that refers to elevated blood pressure. This illness leads to coronary and cerebrovascular diseases. Guidelines consist of a systolic pressure above 140 and a diastolic pressure above 90. Systolic pressure is a response to a change in central pressure, diastolic pressure is a response to peripheral pressure. The difference between systolic and diastolic pressure is called pulse pressure. Vessel walls normally yield to the volume of blood that flows into them. When the systolic pressure increase and the diastolic pressure decreases, the pulse pressure increases to a strong, bounding, wide, pulse pressure. When the systolic pressure decreases and the diastolic pressure increases the pulse pressure decreases to a rapid, weak, thready, narrow pulse pressure that leads to shock. Primary and secondary hypertension are significant conditions because they increase the work of the cardiovascular system. Diseases such as congestive heart failure, strokes, renal failure, and heart attacks are serious complications.

Jean Fowler is 58 years old. For the past year she has been under her doctor's care for renal disease. Recently her blood pressure has increased significantly, and although she has taken medication to reduce her pressure, the medication is not effective. Her doctor admitted her to the hospital for tests and to begin a new medication. While you are helping her get oriented to the hospital routine, she tells you she has a severe headache.

DIRECTIONS

You are to plan care for your patient. Use the case study above or a patient in your clinical practice. Care plans allow for individualized care for each patient. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care, and use the information in Objective 3 to complete a plan of care for your patient. Your instructor will provide a care plan form for your use.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language

- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing

- Complete forms and records

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT SHEET 2

APPLYING THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: BLOOD VESSELS

V

Name ______________________________ Score ________

OBJECTIVE 10

Plan care for the patient with peripheral vascular disorders.

INTRODUCTION

Thrombophlebitis is an inflammation of the veins with clot formation that involves both superficial and deep veins. Clots form, then grow larger when placque adds to their size. If clots dislodge, they can travel to the heart or lungs. The blood clotting mechanism is ineffective when patients are inactive or vessels are damaged. When the nurse assesses the patient, a careful check of pulses is implemented. If they cannot be felt, then the aid of a doppler is helpful. This ultrasound device is used to assess the flow of blood through vessels when they cannot be felt or heard with a stethoscope. Damage to veins or a blockage can prevent the nurse from assessing the pulses. The practical nurse has to be knowledgeable, supportive, and able to give informed advice about the disease and complications. Reinforcing these aspects at every opportunity is an important part of the nurses's responsibility.

Jennifer Anderson is 42 years old. She has been obese most of her life, and after giving birth to seven children, the condition of the veins in her legs has deteriorated rapidly. She has been admitted to the hospital with thrombophlebitis.

DIRECTIONS

Use the above situation or a patient in your clinical practice to plan care for a patient. Care plans are essentially research projects for each of your patients. Use medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Your instructor will provide a care plan form for your use.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language

- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing

- Complete forms and records

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

APPLYING THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: BLOOD VESSELS

ASSIGNMENT SHEETS 1 and 2

Care plans should meet the following criteria:

- Nursing process followed

    - Assessment
    - Analysis (under direction of RN)
    - Planning
    - Implementation
    - Outcome/evaluation (under direction of RN)

- Problem stated appropriately

- Discharge planning included

JOB SHEET

APPLYING THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: BLOOD VESSELS

V

Name ______________________________ Score ________

OBJECTIVE 11 **Perform a peripheral vascular assessment.**

INTRODUCTION

Vascular disorders and diseases affect the blood vessels which include veins, arteries, and lymphatics. Long-term conditions require treatment that may not be effective. Vascular diseases and disorders often lead to other medical problems and complications that may be disabling or cause death. Nurses need to be knowledgeable to detect and prevent problems, and to know the difference between arterial and venous diseases and disorders.

EQUIPMENT AND SUPPLIES

- Pen
- Worksheet

PROCEDURE

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient.	_____	_____
3. Wash your hands.	_____	_____

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Interactive Communications
- Communicate with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
4. Inspect both lower extremities.	____	____
5. Inspect both upper extremities.	____	____
6. Compare extremities to each other.	____	____
7. Note the temperature of the extremities.	____	____
8. Note the color of the extremities.	____	____
9. Palpate the pulses in the extremities.	____	____
10. Check the nailbeds for capillary refill.	____	____
11. Check the extremities for edema.	____	____
12. Ask the patient if there is feeling in the extremities.	____	____
13. Ask the patient if there is pain in the extremities.	____	____
14. Ask the patient if the pain is associated with physical activity.	____	____
15. Clean up: wash your hands.	____	____
Evaluation		
1. Document procedure according to agency requirements.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

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PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Performed assessment in a systematic manner	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Observed universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1

EVALUATOR'S COMMENTS

___

___

___

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** — Can perform job with no additional training
3 **Moderately Skilled** — Has performed job during training program; limited additional training may be required
2 **Limited Skill** — Has performed job during training program; additional training is required to develop skill
1 **Unskilled** — Is familiar with process, but is unable to perform job

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WRITTEN TEST

APPLYING THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: BLOOD VESSELS

V

Name ______________________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the blood vessels to their definitions. Write the correct letter in the blank.

Part 1

_____ 1. A stationary blood clot that obstructs vessels

_____ 2. Skin turns pale when pressure is applied; used to test circulation

_____ 3. An excessive amount of lipids (fat) in the blood

_____ 4. A mass of tissue, fat, air bubbles, foreign objects, or bacteria that moves from its place of origin and obstructs blood vessels

_____ 5. A stagnation or lack of blood flow in the veins

_____ 6. Persistent high blood pressure; the systolic is sustained above 140 and the diastolic is sustained above 90

a. areola
b. blanching
c. blobbing
d. bruits
e. embolus
f. Homan's sign
g. hyperkinesia
h. hyperlipidemia
i. hypertension
j. intermittent claudication
k. orthostatic hypotension
l. phlebitis
m. stepped program
n. tinnitus
o. thrombus
p. venous stasis

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Part 2

_____ 1. Ringing in the ears

_____ 2. Abnormally low blood pressure when moving to an erect position

_____ 3. Pain in the calf when toes are dorsiflexed; a sign of thrombosis

_____ 4. Venous inflammation

_____ 5. Venous or arterial sounds heard during auscultation

_____ 6. A treatment plan with increasing or decreasing therapy intensity

_____ 7. Severe calf pain when walking or standing that subsides with rest; caused by poor blood supply

a. areola

b. blanching

c. blobbing

d. bruits

e. embolus

f. Homan's sign

g. hyperkinesia

h. hyperlipidemia

i. hypertension

j. intermittent claudication

k. orthostatic hypotension

l. phlebitis

m. stepped program

n. tinnitus

o. thrombus

p. venous stasis

May be photocopied for student use

OBJECTIVE 2

Choose the correct word or phrase to complete statements about basic peripheral vascular assessment. Write the correct letter in the blank.

_____ 1. Pallor indicates a possible

a. slow blood supply
b. injury
c. obstruction
d. ischemia

_____ 2. When determining the peripheral status, the nurse must consider the quality, absence or presence of

a. pain
b. capillary refill
c. skin color and temperature
d. pulse

_____ 3. When assessing capillary refill time, the nurse should watch for all the following EXCEPT

a. time between blanching and color return
b. sluggishness
c. decreased radial pulse
d. quickness

_____ 4. Noting the duration and intensity of pain and its relationship to exercise and rest would give the nurse information about

a. the presence or absence of severe ischemia
b. location of the occlusion
c. trophic change
d. hypertension

_____ 5. To assess the extremities, the nurse should do all the following EXCEPT

a. ask patients how they feel
b. compare the extremities to each other
c. first elevate the lower extremities
d. note the location of pain

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_____ 6. Pulses the nurse checks include the radial, femoral, popliteal, posterior tibial, and

a. dorsalis femoral
b. anterior tibial
c. dorsalis pedis
d. pedal radius

_____ 7. Trophic changes occur when nourishment normally supplied via the circulatory system

a. does not reach affected tissue
b. is not produced by the body
c. is trapped in affected tissue
d. is depleted by chemical changes in the affected tissue

OBJECTIVE 3

Choose the correct word or phrase to complete statements about hypertension. Write the correct letter in the blank.

_____ 1. All the following characteristics describe primary hypertension EXCEPT

a. genetic
b. progresses to a stable condition
c. affects 90% of hypertension patients
d. affects men most often

_____ 2. Secondary hypertension has all the following characteristics EXCEPT

a. begins around age 30
b. is severe and progresses rapidly
c. related to high salt intake
d. associated with other diseases

_____ 3. Medical management for primary hypertension includes behavior modification such as dietary changes, weight control, exercise, and

a. biofeedback
b. stress reduction
c. sleep therapy
d. aversion therapy

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_____ 4. Hypertension is normally treated by administering

a. diuretics
b. antihistamines
c. tranquilizers
d. corticosteroids

_____ 5. Hospitalization is usually required for patients with

a. essential hypertension
b. malignant hypertension
c. primary hypertension
d. secondary hypertension

_____ 6. Signs and symptoms of primary hypertension include

a. flushed facial appearance
b. chest pain
c. retinal hemorrhages
d. orthopnea

_____ 7. Health care management for patients with primary hypertension includes

a. anticoagulants and analgesics
b. bed rest
c. diet modification and weight control
d. treat underlying condition

_____ 8. The teaching plan for patients with hypertension should include

a. discuss the need for decreased fluid intake
b. encourage patient to wear supportive stockings
c. instruct patient about treatments and results
d. stress the need to avoid smoking and caffeine

_____ 9. When implementing the plan to promote healing for a patient with hypertension, you would

a. provide pre- and postoperative care
b. elevate affected area
c. provide diet low in sodium, fat, and cholesterol
d. keep patient warm

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OBJECTIVE 4

Choose the correct word or phrase to complete statements about diseases and disorders of the arteries. Write the correct letter in the blank.

_____ 1. An arterial embolism can

a. gradually harden the vessels
b. be caused by smoking
c. be carried to smaller vessels
d. cause pain and burning proximal to blockage

_____ 2. Plaque consisting of lipids, calcium, carbohydrates, blood components, and fibrous tissue that gradually form in vessels and obstruct blood flow is a description of

a. Raynaud's disease
b. arteriosclerosis
c. atherosclerosis
d. Buerger's disease

_____ 3. The predisposing factors of Buerger's disease include

a. inactivity, emotional stress, hypertension
b. exposure to cold, high salt intake
c. age, smoking, familial tendency
d. obesity, hyperlipidemia, injury

_____ 4. Factors related to Raynaud's disease are

a. inactivity, high salt intake
b. exposure to cold, emotional tension
c. age, gender, smoking
d. obesity, family tendency

_____ 5. Femoral and carotid arteries are most often affected with

a. arteriosclerosis
b. Buerger's disease
c. atherosclerosis
d. Raynaud's disease

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_____ 6. Patients with inflamed vessels that loose elasticity and gradually harden, probably have

a. Buerger's disease
b. Raynaud's disease
c. arteriosclerosis
d. atherosclerosis

_____ 7. Inactivity, smoking, emotional stress, estrogen, and a diet high in saturated fats and refined carbohydrates increase the risk of

a. atherosclerosis
b. arteriosclerosis
c. Raynaud's disease
d. arterial thrombus or embolism

_____ 8. Blood in the urine or saliva is symptomatic of

a. Buerger's disease
b. atherosclerosis
c. arterial thrombus or embolism
d. arteriosclerosis

_____ 9. Bruits, dry and shiny skin, and hair loss on extremities are symptomatic of

a. Buerger's disease
b. Raynaud's disease
c. arterial thrombus or embolism
d. arteriosclerosis

_____ 10. A patient diagnosed with an arterial embolism might be prescribed

a. anticoagulants and fibrinolytics
b. antibiotics and anticoagulants
c. vasodilators and antibiotics
d. fibrinolytics and vasodilators

_____ 11. Surgical interventions for Buerger's disease include

a. sympathectomy
b. embolectomy
c. amputation
d. angioplasty

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_____ 12. Calcium antagonists, vascular smooth muscle relaxants, and vasodilators can be prescribed for patients with

a. atherosclerosis
b. arterial embolism or thrombosis
c. Buerger's disease
d. Reynaud's disease

OBJECTIVE 5

Choose the correct word or phrase to complete statements about disorders of the veins. Write the correct letter in the blank.

_____ 1. Thrombophlebitis is characterized by

a. formation of a thrombus in a vein
b. chronic occlusion of the veins
c. deterioration of the veins associated with collagen diseases
d. inflammation of the veins associated with clots

_____ 2. Obesity, pregnancy, heredity factors, and prolonged standing can cause

a. stasis ulcers
b. phlebothrombosis
c. varicose veins
d. postphlebitic syndrome

_____ 3. Chronic inflammation and vascular insufficiency causes breakdown of skin progressing from simple loss of skin integrity to deep, open sores caused by

a. postphlebitic syndrome
b. stasis ulcers
c. phlebitis
d. varicose veins

_____ 4. Inflammation of the veins resulting from venous stasis, pregnancy or bed rest that accompanies chronic illness can result in

a. stasis ulcers
b. phlebitis
c. phlebothrombosis
d. thrombophlebitis

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_____ 5. Chronic, progressive disease resulting in tortuous, distended veins is

a. phlebothrombosis
b. postphlebitic syndrome
c. varicose veins
d. stasis ulcers

_____ 6. Venal obstruction from pregnancy, abdominal tumors, burns, sickle cell anemia, diabetes, and heredity can result in

a. stasis ulcers
b. postphlebitic syndrome
c. phlebothrombosis
d. phlebitis

_____ 7. Thrombophlebitis can be surgically treated with embolectomy, thrombectomy, endarterectomy, and

a. angioplasty
b. sclerosing injection
c. ligation and stripping
d. grafts

_____ 8. Stasis ulcers are cared for with elevation, bedrest, proper cleansing and foot care, exercise, use of sterile bandages, whirlpool treatments, and

a. use of elastic stockings
b. skin lubrication
c. vitamin and protein supplements
d. compression

OBJECTIVE 6

Choose the correct word or phrase to complete statements about aneurysms. Write the correct letter in the blank.

_____ 1. Aneurysms occur when walls of a blood vessel become

a. weakened
b. swollen
c. perforated
d. misshapen

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____ 2. Aneurysm symptomology and damage depend upon its size, type, and

a. shape
b. location
c. age
d. volume

____ 3. Cranial aneurysms frequently occur in the

a. subarachnoid space
b. occipital lobe
c. Circle of Willis
d. parietal lobe

____ 4. The most successful treatment for aneurysms is

a. surgery
b. medication
c. behavior modification
d. radiation

____ 5. The first sign of an abdominal aneurysm can occur when the patient suffers

a. severe edema
b. unconsciousness
c. abdominal pain
d. low back pain

____ 6. Abdominal aneurysms are usually located in the

a. abdominal aorta above the renal artery
b. abdominal aorta below the renal artery
c. mesenteric arteries
d. ilian artery

____ 7. Aneurysm patients should avoid

a. fat
b. sodium
c. caffeine
d. spicy foods

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_____ 8. Patients suffering cranial aneurysms might be prescribed all the following EXCEPT

a. vasodilators
b. stool softeners
c. steroids
d. analgesics

_____ 9. Complications of cranial aneurysms include

a. hemorrhage
b. cranial infection
c. hydrocephalus
d. coma

_____ 10. The medication most often prescribed for a thoracic aneurysm is

a. Phenytoin
b. sedatives
c. antihypertensives
d. none

_____ 11. Nursing care for an aneurysm patient should include education about all the following EXCEPT

a. alcohol avoidance
b. smoking cessation
c. avoiding caffeine
d. stress reduction

OBJECTIVE 7 **Choose the correct word or phrase to complete statements about disorders of the lymphatic system.** Write the correct letter in the blank.

_____ 1. Inflammation of lymph vessels is

a. lymphoma
b. lymphedema
c. lymphangitis
d. lymphadenitis

May be photocopied for student use.

_____ 2. Streptococcus is the organism most often responsible for

a. lymphedema
b. lymphoma
c. lymphadenitis
d. lymphangitis

_____ 3. Malignant disease that originates in the lymph system and involves enlargement of the lymph nodes with metastasis is

a. Hodgkin's disease
b. lymphomas
c. non-Hodgkin's lymphomas
d. infectious mononucleosis

_____ 4. Lymphomas are most commonly treated with

a. behavior modification and chemotherapy
b. surgery and radiation
c. radiation and chemotherapy
d. surgery and chemotherapy

_____ 5. Red streaks in the arm or leg leading from a non-localized infection, fever, chills, and tenderness are symptomatic of

a. lymphangitis
b. Hodgkin's disease
c. non-Hodgkin's lymphoma
d. infectious mononucleosis

_____ 6. Antibiotics and draining of abscesses are treatments for

a. infectious mononucleosis
b. lymphangitis
c. non-Hodgkin's lymphoma
d. Hodgkin's disease

May be photocopied for student use.

OBJECTIVE 8 **Choose the correct word or phrase to complete statements about the nursing process for pediatric patients with diseases and disorders of the peripheral blood vessels.** Write the correct letter in the blank.

_____ 1. Behavior disorders associated with systemic hypertension include all of the following EXCEPT

a. head-banging
b. irritability
c. withdrawal
d. night terrors

_____ 2. Systemic hypertension can be caused by disorders of all systems EXCEPT

a. renal
b. lymphatic
c. vascular
d. endocrine

_____ 3. Systemic hypertension is most commonly found in

a. Hispanics
b. Native Americans
c. African-Americans
d. Caucasians

_____ 4. Medications for systemic hypertension include

a. diuretics and antihypertensives
b. analgesics and diuretics
c. diuretics and sedatives
d. sedatives and hypertensives

_____ 5. Signs and symptoms of systemic hypertension include

a. nausea and vomiting
b. fatigue
c. asymptomatic presentation
d. lightheadedness and fainting

NOTICE: Objectives 9-11 are evaluated on the Job Sheet/ Assignment Sheets in this unit. If you have not completed these components, see your instructor.

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WRITTEN TEST ANSWERS

APPLYING THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: BLOOD VESSELS V

OBJECTIVE 1

Part 1		Part 2	
1.	o	1.	n
2.	b	2.	k
3.	h	3.	f
4.	e	4.	l
5.	p	5.	d
6.	i	6.	m
		7.	j

OBJECTIVE 2

1. c
2. d
3. c
4. a
5. c
6. c
7. a

OBJECTIVE 3

1. d
2. b
3. b
4. a
5. b
6. a
7. c
8. d
9. c

OBJECTIVE 4

1. c
2. c
3. c
4. b
5. a
6. c
7. a
8. c
9. d
10. a
11. c
12. d

OBJECTIVE 5

1. d
2. c
3. b
4. b
5. c
6. a
7. d
8. c

OBJECTIVE 6

1. a
2. b
3. c
4. a
5. d
6. b
7. c
8. a
9. c
10. d
11. a

OBJECTIVE 7	1.	c
	2.	d
	3.	a
	4.	c
	5.	c
	6.	b
OBJECTIVE 8	1.	c
	2.	b
	3.	d
	4.	a
	5.	c

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD

VI

INTRODUCTION

The hematologic system consists of the blood, its components, and the bone marrow where blood is produced. The blood is a red, opaque fluid that flows through arteries and veins to all parts of the body. It carries nutrients to cells and waste products from cells. The components of blood include *erythrocytes* (red blood cells), responsible for transporting hemoglobin; *leukocytes* (white blood cells), responsible for fighting infection; and *platelets* (thrombocytes), responsible for clotting. These components are suspended in a fluid called *plasma*. The human body contains about five liters of blood. Bone marrow consists of connective tissue cells and is found in the vertebral column, ribs, sternum, and long bones. Marrow comprises about five percent of the total body weight.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the hematologic system and associated nursing processes. In addition, you will demonstrate these competencies by completing Assignment Sheets, Job Sheets, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the hematologic system to their correct definitions.
2. Choose the correct word or phrase to complete statements about basic hematologic assessment.
3. Choose the correct word or phrase to complete statements about anemias.
4. Choose the correct word or phrase to complete statements about leukemia.
5. Choose the correct word or phrase to complete statements about clotting disorders.
6. Choose the correct word or phrase to complete statements about polycythemia.

7. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the blood.

8. Choose the correct word or phrase to complete statements about transfusion therapy.

9. Plan care for the patient with disorders of the blood. (Assignment Sheet 1)

10. Interpret common blood values. (Assignment Sheet 2)

11. Assist with a bone marrow aspiration. (Job Sheet 1)

12. Monitor transfusion therapy. (Job Sheet 2)

SUGGESTED ACTIVITIES

APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD

VI

PREPARATION

- Review unit and plan presentation.

- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.

- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objectives 1 and 2, the first two groupings, including basic information that supports the rest of the unit and basic hematologic assessment;

  Part 2 — Objectives 3-5, the next three groupings, including anemias, leukemia, and clotting disorders; and

  Part 3 — Objectives 6-8, the next three groupings, including polycythemia, pediatric disorders; and transfusion therapy.

- Review teaching suggestions and plan classroom activities.

- Determine how you will schedule time for students to demonstrate competence in the required procedures.

- Order materials to supplement unit.

- Invite a guest speaker to discuss diseases and disorders of the hematologic system.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.

- Obtain models and large pictures of the hematologic system.

- Make a poster of the hematologic system.

- Make a bulletin board showing the hematologic system.

- Devise games and/or crossword puzzles to reinforce terms or groupings.
- **HOSA** Integration
  - Assist students to conduct a chapter service project on diseases and disorders of the hematologic system.
  - Develop objectives for service project and identify a theme.
  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.
  - Plan a community or school health project that involves disseminating pamphlets about care of patients with diseases and disorders of the hematologic system.
  - Develop and/or participate in a community teaching project that involves diseases and disorders of the hematologic system.
- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.
- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the hematologic system to their correct definitions.

- Discuss terms associated with the hematologic system.
- Have students play reinforcement games and work crossword puzzles using terms.
- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about basic hematologic assessment.

- Review the process of hematologic assessment.
- Have students share ideas that might be helpful in doing a complete hematologic assessment.

- Stress that students can use the information in this section to complete Job Sheet 1.

- Review the components of the hematological system.

Objective 3: Choose the correct word or phrase to complete statements about anemias.

- Have students share relevant incidents about friends or family members who have problems related to anemias.

- Have students share ideas that might be helpful in evaluating anemias.

- Discuss other diseases and disorders not mentioned in this unit.

Objective 4: Choose the correct word or phrase to complete statements about leukemia.

- Have students share relevant incidents about friends or family members who have problems related to leukemia.

- Have students share ideas that might be helpful in evaluating leukemia.

- Discuss other neoplastic diseases and disorders not mentioned in this unit.

- Have students complete Assignment Sheet 1.

Objective 5: Choose the correct word or phrase to complete statements about clotting disorders.

- Have students share relevant incidents about friends or family members who have problems related to clotting disorders.

- Have students share ideas that might be helpful in evaluating clotting disorders.

- Discuss other diseases and disorders not mentioned in this unit.

Objective 6: Choose the correct word or phrase to complete statements about polycythemia.

- Have students share relevant incidents about friends or family members who have problems related to polycythemia.

- Have students share ideas that might be helpful in evaluating polycythemia.

- Discuss other bone marrow diseases and disorders not mentioned in this unit.

Objective 7: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the blood.

- Have students share relevant incidents about friends or family members who have problems related to pediatric blood disorders.
- Have students share ideas that might be helpful in evaluating pediatric blood disorders.
- Discuss other pediatric diseases and disorders not mentioned in this unit.

Objective 8: Choose the correct word or phrase to complete statements about transfusion therapy.

- Have students share relevant incidents about friends or family members who have had transfusion therapy.
- Discuss other types of transfusion therapy not mentioned in this unit.

APPLICATION

- Make a skit or video having to do with patient care of a person with problems associated with the hematologic system. Either the students or the teachers can be presenters.
- Students can practice care of the patient with problems associated with this unit.
- Have students present a one-minute speech on care of a patient with problems associated with the hematologic system.

Objective 9: Plan care for the patient with disorders of the blood. (Assignment Sheet 1)

- Use the Assignment Sheet to give students an opportunity to practice ideas that help when they care for a patient with diseases and disorders of the hematologic system.

Objective 10: Interpret common blood values. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give an opportunity to practice ideas that help when they interpret common blood values.

Objective 11: Assist with a bone marrow aspiration. (Job Sheet 1)

- Use Job Sheet 1 to give students hands-on experience in assisting with a bone marrow aspiration.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 12: Monitor transfusion therapy. (Job Sheet 2)

- Use Job Sheet 2 to give students hands-on experience in monitoring transfusion therapy.
- Use a mannequin to practice and demonstrate procedures in the classroom.
- Discuss signs of transfusion reaction.

EVALUATION

Pretest

- Give Written Test as pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.
- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.

- Complete appropriate sections of Competency Profiles.

- Reteach and retest if necessary.

- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.

- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.

- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.

- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *University of California Berkeley Wellness Letter*, 48 Shattuck Square, Suite 43, Berkeley, CA. 94704-1140.

UNIT REFERENCES

- Betz, Cecily Lynn, and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.

- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.

- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St. Louis: Mosby-Year Book, Inc., 1991.

- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.

- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.

- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.

- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.

- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C.V. Mosby Company, 1990.

INFORMATION SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD *VI*

OBJECTIVE 1

Match terms associated with diseases and disorders of the hematologic system to their correct definitions.

- **anemia** — A condition in which the red cell count is below normal

  NOTE: Anemia is not a disease in itself, but a symptom of a variety of diseases.

- **erythrocytes** — Red blood cells (RBCs) that contain hemoglobin, which carries oxygen and gives color to the blood
- **jaundice** — Condition of having a yellow color to skin and sclera, characteristic of some diseases
- **leukocytes** — White blood cells (WBCs) that protect the body from infection and produce antibodies
- **petechiae** — Small, purplish, hemorrhagic spots on the skin
- **phlebotomy** — Withdrawing blood from a vein with a needle or through a surgical opening
- **platelets (thrombocytes)** — Bodies present in the blood that adhere to the edges of injuries to stop bleeding
- **pruritus** — Severe itching of the skin

OBJECTIVE 2

Choose the correct word or phrase to complete statements about components of basic hematologic assessment.

- **General impressions** — The patient's level of anxiety, irritability, degree of weakness and fatigue, appropriateness of thought content, and input from family members are all essential initial impressions.
- **Oral indications** — Inspect the oral cavity for ulcerations, bleeding gums, sore mouth or tongue, and ask about eating difficulties.
- **Respiratory status** — Monitor for increased respiratory rate or difficulty breathing or coughing.
- **Temperature** — In addition to assessing body temperature, ask if the patient frequently feels "cold."

- **Bone and joint status** — Ask if the patient experiences pain or lack of coordination.

- **Skin condition** — Inspect the patient for petechiae, lesions, jaundice, or pallor. Ask if the patient experiences numbness, pruritus, or tingling.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about anemias.

Description and etiology

Pernicious anemia — Lack of the intrinsic factor needed for the body to absorb vitamin B_{12} from food. The gastric mucosa secretes the intrinsic factor. If the mucosa is damaged, the intrinsic factor is not secreted and vitamin B_{12} is not absorbed. Vitamin B_{12} is responsible for maturation of red blood cells. Pernicious anemia usually affects older adults.

Causes

- Damage to the glandular mucosa

Health care management

- Untreated pernicious anemia is fatal
- Medications: vitamin B_{12} injections, folic acid supplements, iron replacements
- Severe cases may require transfusions of packed RBCs

ASSESSMENT

Signs and symptoms

Pernicious anemia

- Weakness, dysphagia
- Sore, burning tongue
- Nausea, flatulence, and indigestion
- Mental confusion, personality changes
- Paresthesia of extremities

Description and etiology

Iron-deficiency anemia—Below-normal level of iron in the blood. Iron is needed to synthesize red blood cells and hemoglobin. Patients need to ingest and absorb adequate amounts of iron in their diets to compensate for the loss.

Causes

- Chronic blood loss (menstrual bleeding, gastrointestinal bleeding, etc.)
- Tumors
- Ulcers

- Nutritional deficit

Health care management

- Treat underlying condition
- Emphasize a well-balanced diet high in iron and vitamin C
- Medications: iron supplements

ASSESSMENT

Iron-deficiency anemia

Signs and symptoms

- Fatigue, exertional dyspnea
- Headache
- Vertigo
- Paresthesia
- Pica (craving for unusual food or non-food substances)

Description and etiology

Folic acid deficiency anemia — Below-normal levels of folic acid in the blood. Folic acid is needed to produce red blood cells.

Causes

- Dietary deficiency
- Chronic alcoholism
- Medications or diseases that inhibit absorption of folic acid

Health care management

- Emphasize a well-balanced diet; provide nutritional supplements when necessary
- Refer alcoholic patients to treatment program

ASSESSMENT

Folic acid deficiency anemia

Signs and symptoms

- Weakness and fatigue
- Pallor
- Sore tongue

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PERNICIOUS, IRON-DEFICIENCY, and FOLIC ACID DEFICIENCY ANEMIAS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Note if patient has taken medications that inhibit absorption or cause blood loss
• Collect equipment	
• Promote healing	• Administer medications • Assist with blood transfusions • Give supportive care to patient and family • Administer dietary supplements • Provide diet high in vitamins and minerals
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor hemoglobin and hematocrit levels • Assess for fatigue and respiratory difficulty in relation to activity
• Plan for patient's discharge	• Prepare teaching plan — Instruct patient to avoid infectious situations — Stress the need for a balanced diet — Emphasize avoidance of substances such as alcohol or certain medications

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Aplastic anemia** — Depression or failure of the bone marrow. Inadequate levels of erythrocytes, leukocytes, and platelets are produced.
Causes	• Approximately 50% have no known cause • Exposure to radiation or antineoplastic drugs (predictable cause)

- Liver failure
- Exposure to certain drugs and chemicals
- Congenital defects

Health care management

- Remove causative agent
- Blood transfusions
- Prevent infection
- Medications: androgenic steroids, antibiotics, non-aspirin antipyretic/analgesic
- Surgeries: bone marrow transplant
- Complications: infection (major cause of death), thrombocytopenia

ASSESSMENT

Aplastic anemia

Signs and symptoms

- Pallor
- Weakness, fatigue, and dyspnea
- Abnormal bleeding (from gums, nose, rectum, vagina)
- Frequent infections, especially of the urinary tract and upper respiratory tract, with high fever
- Petechiae

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

APLASTIC ANEMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Check for use of antineoplastic drugs, chloramphenicol, sulfonamides, phenylbutazone, anticonvulsants
• Collect equipment	
• Promote healing	• Assist with blood transfusions, bone marrow aspiration and biopsy, bone marrow transplantation • Prevent injury and infection • Give supportive care to patient and family • Administer medications • Provide diet high in vitamins and minerals
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss techniques to prevent infection and hemorrhage

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Hypovolemic anemia — Secondary anemia caused by abnormally low blood volume. The blood volume of an average adult is 6000 ml. In an average adult, blood loss of 1000 ml or more decreases the amount of oxygen carried to the body tissues, leading to hypovolemic shock.

Causes

- Trauma
- Gastrointestinal bleeding
- Surgery

- Severe burns
- Clotting disorders

Health care management

- Untreated hypovolemic anemia is fatal
- Control bleeding
- Blood transfusions
- Oxygen therapy
- Complications: hypovolemic shock

ASSESSMENT

Signs and symptoms

Hypovolemic anemia

- Decreased blood pressure
- Rapid, weak, thready pulse
- Thirst
- Jaundice
- Nausea and vomiting
- Decreased urinary output
- Rapid, shallow respirations
- Pale, cold, clammy skin
- Confusion

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HYPOVOLEMIC ANEMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with blood transfusions • Control bleeding
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications (signs of shock)
• Plan for patient's discharge	• Prepare teaching plan — If hemorrhaging is caused by a chronic problem, emphasize the importance of monitoring and reporting any bleeding

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Acquired hemolytic anemia — Anemia caused by destruction of red blood cells. RBCs are destroyed faster than they can be produced by the bone marrow.

Causes

- Toxic chemicals
- Certain drugs (alpha-methyldopa, penicillin)

Health care management

- Identify and eliminate causative factor
- Medications: corticosteroids
- Surgeries: splenectomy

ASSESSMENT — Signs and symptoms

Acquired hemolytic anemia

- Pallor
- Fatigue
- Jaundice
- Dyspnea on exertion

ANALYSIS — Report findings to RN who will assimilate information for analysis and nursing care.

ACQUIRED HEMOLYTIC ANEMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Check for medications which may have caused onset
• Collect equipment	
• Promote healing	• Administer medications • Give supportive care to patient and family • Provide diet high in vitamins and minerals, administer dietary supplements • Provide pre- and postoperative care if needed
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 4

Choose the correct word or phrase to complete statements about leukemia.

NOTE: There are three types of leukemia: lymphocytic, granulocytic, and monocytic. Patients usually die of hemorrhage or infection. Research for a cure is ongoing, and significant progress has been made. A variety of chemotherapy agents put some types of leukemia in remission.

Description and etiology

Acute myelogenous leukemia (AML) — A malignant disease of the hemopoietic stem cells. The bone marrow produces immature leukocytes that spread throughout the body, causing destruction to all the body's organs. As the number of immature white cells increases, other blood cells are reduced and destroyed. Young children and older adults are usually affected. If the patient is untreated or does not respond to therapy, AML is fatal within 2 to 3 months. Fifty to 75% of treated patients experience complete remissions of 2 to 3 years.

Causes

- Genetic factors
- Radiation
- Exposure to certain chemicals
- Immune deficiencies

Health care management

- Chemotherapy
- Medications: antineoplastic agents, antibiotics
- Protective isolation
- Surgeries: bone marrow transplant

ASSESSMENT

Acute myelogenous leukemia

Signs and symptoms

- Fever
- Frequent respiratory infections
- Anemia
- Bleeding of mucous membranes
- Pallor
- Bruises easily
- Fatigue

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ACUTE MYELOGENOUS LEUKEMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with chemotherapy • Give supportive care to patient and family • Administer medications • Assist with bone marrow aspiration and biopsy • Provide pre- and postoperative care as needed • Maintain protective isolation
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Instruct patient to avoid infectious situations — Instruct patient to watch for onset or changes in symptoms

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Chronic myelogenous leukemia (CML)** — A neoplastic disease characterized by granulocyte overproduction. In 80-90% of cases, a chromosomal abnormality called the *Philadelphia chromosome* is present. Middle-aged and older adults are usually affected. CML often develops into a terminal accelerated phase (blastic phase).
Causes	• Unknown (chromosome damage from radiation may be involved)
Health care management	• Chemotherapy • Medications: antineoplastic agents • Protective isolation

- Surgeries: bone marrow transplants

ASSESSMENT

Chronic myelogenous leukemia

Signs and symptoms

- Fatigue and weakness
- Anorexia
- Weight loss
- Anemia
- Bone pain
- Elevated WBC count

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CHRONIC MYELOGENOUS LEUKEMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with chemotherapy • Administer medications • Give supportive care to patient and family • Assist with bone marrow aspiration and biopsy • Encourage fluid intake • Maintain protective isolation
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan • Instruct patient to avoid infectious situations

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Chronic lymphocytic leukemia (CLL) — A type of leukemia characterized by an accumulation of small, abnormal lymphocytes. CLL usually affects older adults, but may remain asymptomatic for many years.

Causes

- Unknown (there is a familial tendency)

Health care management

- Asymptomatic patients are given supportive treatment only (adequate rest, nutrition, and exercise)
- Chemotherapy
- Radiation therapy
- Protective isolation
- Transfusions of blood and/or platelets
- Medications: antineoplastics, glucocorticoids, steroids

ASSESSMENT

Chromic lymphocytic leukemia

Signs and symptoms

- Lymph node enlargement
- Anemia
- Weight loss
- Splenomegaly
- Pruritic skin lesions
- Increased WBC count
- Fatigue

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CHRONIC LYMPHOCYTIC LEUKEMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with chemotherapy • Administer medications • Give supportive care to patient and family • Assist with bone marrow aspiration and biopsy • Encourage fluid intake • Maintain protective isolation
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan • Instruct patient to avoid infectious situations

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about clotting disorders.

Description and etiology

Disseminated intravascular coagulation (DIC) — An acquired, pathological response to disease or injury. The normal clotting mechanism is accelerated and diffused. Widespread clotting leads to depletion of clotting factors, resulting in generalized bleeding.

Causes

- Incomplete abortion
- Certain surgeries (lung, brain, prostate)
- Septicemia
- Malignancy
- Transfusion reaction

	• Shock • Serious burns
Health care management	• Treatment of underlying condition • Transfusion replacement • Medications: heparin, antibiotics
ASSESSMENT	**Signs and symptoms**
Disseminated intravascular coagulation	• Bone and joint pain • Bleeding from mucous membranes, surgical sites, venipuncture sites, GI tract, and body orifices • Dyspnea • Petechiae and ecchymosis • Decreased urinary output • Decreased movement and strength of extremities • Hypotension
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

DISSEMINATED INTRAVASCULAR COAGULATION

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with phlebotomy • Administer medications • Give supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Record amount of drainage • Observe for complications • Check stools, emesis, and urine for occult blood
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Thrombocytopenia — Decrease in the number of circulating platelets. The lack of platelets leads to abnormal bleeding, especially from the small capillaries. Acute thrombocytopenia is most common in children; chronic thrombocytopenia is most common in women.

Causes

- Lowered platelet production caused by
  - Alcohol
  - Nonsteroidal anti-inflammatory agents
  - Oral hypoglycemics
  - Salicylates
  - Myelosuppressive therapy
  - Leukemia
  - Radiation therapy
  - Aplastic anemia
  - Quinidine
- Increased platelet destruction caused by
  - Infection
  - DIC
  - Idiopathic thrombocytopenic purpura
- Loss or abnormal distribution of platelets caused by
  - Hypersplenism
  - Blood loss

Health care management

- Treatment of underlying condition
- Discontinue causative drugs
- Platelet transfusions
- Injury prevention

ASSESSMENT

Signs and symptoms

Thrombocytopenia

- Easy bruising

- Petechiae
- Ecchymoses and hematomas at sites of trauma
- Bleeding from mucous membranes, GI tract, GU tract, respiratory tract
- Heavy bleeding between menses

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

THROMBOCYTOPENIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Check for causative medications
• Collect equipment	
• Promote healing	• Assist with phlebotomy • Assist with transfusions • Give supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 6 **Choose the correct word or phrase to complete statements about polycythemia.**

Description and etiology

Polycythemia vera — A faulty mechanism in the bone marrow causes an excessive production of erythrocytes, granulocytes, and platelets. Red blood cells proliferate, causing an increased blood volume. Blood becomes more viscous, leading to a decreased blood flow.

Causes

- Unknown

Health care management

- Phlebotomy therapy
- Myelosuppressive therapy
- Pain relief
- Avoid foods high in iron content
- Medications: xanthine oxidase inhibitors, antihistamines, antineoplastics
- Complications: angina, thrombi, bleeding, gout, congestive heart failure, acute leukemia

ASSESSMENT

Signs and symptoms

Polycythemia vera

- Headaches
- Vision abnormalities
- Skin and mucosa have red-purple hue
- Pruritus
- Pain in fingers and toes
- Nosebleeds
- Ecchymoses
- Bleeding in GI tract
- Thrombosis

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

POLYCYTHEMIA VERA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with phlebotomy • Administer medications • Provide low-iron diet • Give supportive care • Encourage ambulation
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Need for low-iron diet — Signs of extremity thromboses — Need for follow-up care

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 7

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the blood.

Description and etiology

Hemophilia — A hereditary disorder characterized by deficiency of blood clotting factors. Prolonged coagulation time results in persistent and sometimes severe bleeding. Hemophilia is transmitted from mother to son as a recessive sex-linked characteristic. Women rarely develop hemophilia, but can inherit the trait from either parent and pass it on to their male children.

Causes

- Deficiency or malfunction of blood clotting factor

Health care management

- Replacement of the missing clotting factor

NOTE: Because the clotting factor is prepared from pooled blood, patients are at a higher risk of exposure to AIDS or hepatitis.

- Injury prevention
- Supportive care
- Pain relief
- Genetic counseling recommended for parents

ASSESSMENT

Signs and symptoms

Hemophilia

- Excessive bleeding may be observed from umbilical cord or after circumcision, but diagnosis is usually made after the child becomes active
- Easily bruised
- Spontaneous hematomas of soft tissues
- Prolonged bleeding from mucous membranes
- Bleeding into joints or intracranial areas

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HEMOPHILIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with phlebotomy • Observe for thrombosis • Give supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan — Hemorrhage prevention — Patient should wear medical alert bracelet

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Thalassemia (Cooley's anemia) — A chronic, incurable, hereditary hemolytic anemia. In the United States, thalassemia is most common in persons of Italian, Greek, or Chinese ancestry. Inheritance of the gene from only one parent causes *thalassemia minor*, a relatively benign disease that may be asymptomatic or cause minor anemia. Homozygous inheritance produces *thalassemia major*, which is often fatal in late childhood or early adolescence.

Causes

- Decreased synthesis of one of the Hb globulin chains

Health care management

- Blood transfusions
- Iron chelation therapy
- Prevent skin breakdown
- Genetic counseling recommended for parents
- Medications: iron-chelating agents
- Surgeries: splenectomy
- Complications: splenomegaly, retardation of growth and development, diabetes mellitus, pathologic fractures, arrhythmias, congestive heart failure

ASSESSMENT

Thalassemia

Signs and symptoms

- Severe anemia
- Pallor, jaundice, or brown pigmentation of skin
- Poor feeding
- Protruding abdomen
- Headache
- Fatigue and listlessness

ANALYSIS | Report findings to RN who will assimilate information for analysis and nursing care.

THALASSEMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions • Prevent injury
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with blood transfusions • Give supportive care to patient and family • Administer medications • Provide diet high in vitamins and minerals • Prevent skin breakdown
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Plan for rest between activities

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Sickle cell anemia — A chronic, incurable condition caused by an inherited defect in the amino acid chain of hemoglobin. The red blood cells form in abnormal crescent shapes. These abnormal cells are unable to carry oxygen to the body because they lodge in small vessels, preventing blood flow. Red blood cells are very fragile, and are rapidly destroyed during this disease. The patient experiences periodic painful crises (periods of exacerbated symptoms). Persons who inherit only one affected gene will have *sickle cell trait*, a less serious (and often asymptomatic) condition. Sickle cell anemia is most common in African-Americans, but can occur in anyone.

Causes

- Genetic factors

Health care management

- Symptomatic treatment during crises
- Crisis avoidance — patient teaching is important
- Blood transfusions
- Genetic counseling recommended for parents
- Medications: antibiotics, analgesics
- Complications: multisystems failure, hemorrhage, infarctions, retinal detachment, transfusion reaction

ASSESSMENT

Sickle cell anemia

Signs and symptoms

- Pain in the back, chest, joints, or extremities
- Low grade fever
- Loss of appetite
- Irritability
- Jaundice
- Abdominal enlargement

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

SICKLE CELL ANEMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Manage pain • Administer medications • Assist with blood transfusions • Give supportive care to patient and family • Provide diet high in vitamins and minerals; encourage fluid intake • Prevent infection
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan • Teach patient to avoid situations or substances that cause a crisis: — Dehydration — Infection — Trauma — Overexertion and fatigue — Emotional stress — Exposure to cold — Alcohol — Cigarettes — Lack of oxygen (in airplanes or at high altitudes, for example)

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology

Acute lymphocytic leukemia (ALL) — A malignant disorder of an individual lymphoid stem resulting in an overproduction of immature leukocytes. Significant advances have been made in the treatment of ALL in recent years: over 90% of patients achieve remission; more than 50% of patients are in remission after five years.

Causes

- Genetic factors
- Exposure to radiation or certain chemicals
- Immune deficiency

Health care management

- Chemotherapy
- Radiation therapy
- Infection prevention
- Protective isolation
- Prophylactic treatment of CNS
- Medications: antineoplastics, glucocorticosteroids

ASSESSMENT

Signs and symptoms

Acute lymphocytic leukemia

- Frequent respiratory infections
- Bleeding of mucous membranes
- Bone pain
- Headaches, seizures
- Fever
- Ecchymoses
- Hepatomegaly
- Vomiting
- Jaundice

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ACUTE LYMPHOCYTIC LEUKEMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with chemotherapy • Administer medications • Give supportive care to patient and family • Assist with bone marrow aspiration and biopsy • Maintain protective isolation • Encourage fluid intake
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan • Instruct patient to avoid infectious situations

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 8

Choose the correct word or phrase to complete statements about transfusion therapy.

- **Whole blood** — Blood containing all components is given to increase blood volume lost from hemorrhage and to prevent shock.
- **Red cells** — Packed red cells are separated from whole blood and given to patients with chronic anemia to increase the oxygen-carrying capacity. The advantage is that patients experience fewer immunological problems because donor antibodies are removed. Washed red cells are administered occasionally because they have fewer white cells and platelets.
- **Platelets** — Given to prevent or control bleeding by activating the clotting mechanism. Patients with leukemia, aplastic anemia, and drug reactions (such as chemotherapy) have

decreased numbers of platelets circulating in their blood and need platelet transfusions.

- **Granulocytes** — Combined with red cells and given to patients with infections and bone marrow suppression. Patients should be ABO compatible.
- **Whole plasma** — The fluid portion of the blood is given to treat clotting defects and to correct hypovolemia in burn patients. Patients should be ABO compatible.
- **Fresh-frozen plasma** — Soon after whole blood is donated, the plasma is separated and then frozen. It furnishes the clotting factors. Patients should be ABO compatible.
- **Plasma proteins** — Consists of albumin, responsible for carrying fluid volume; and immunoglobulins, globulins that are antibodies. Plasma proteins are given to patients who are hypovolemic or have liver diseases.

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DIAGNOSTIC PROCEDURES

Bone marrow aspiration — Bone marrow is semifluid and can be aspirated through a needle. Marrow is usually aspirated from the patient's iliac crest, sternum, or tibia. Bone marrow aspiration is used to diagnose anemia, leukemia, and thrombocytopenia.

Bone marrow biopsy — Bone marrow biopsy provides a larger sample of marrow than aspiration. A core of marrow is removed using a large bore biopsy needle. Bone marrow biopsy is used to diagnose neoplastic disorders.

Laboratory examinations

- **Bleeding time** — A measurement of the time required for a small puncture wound to stop bleeding. This test is used to diagnose coagulation disorders.

- **Clotting time** — A measurement of the time required for a solid clot to form in blood. This test is used to diagnose coagulation disorders and to monitor patients on anticoagulant therapy.

- **Complete blood count (CBC)** — An analysis of the constituents of the blood. Hemoglobin, leukocytes, platelets, and erythrocytes are counted, and hematocrit (Hct) is calculated.

- **Peripheral blood smear** — Microscopic examination of blood cells.

- **Platelet count** — An actual count of the number of platelets.

- **Partial prothrombin time (PPT)** — A test of the rapidity of blood clotting. This test is used to diagnose coagulation disorders and to monitor patients on anticoagulant therapy.

- **Serum iron level** — A measurement of the amount of iron in the serum.

- **White blood cell count (WBC)** — An analysis of the number of WBCs, neutrophils, eosinophils, basophils, lymphocytes, and monocytes.

Schilling test — In stage 1 of this test, radioactive vitamin B_{12} is given to an anemic patient. The patient's urine is collected and tested for radioactivity. In stage 2, the patient is given radioactive vitamin B_{12} along with oral intrinsic factor. The urine is again collected and tested for radioactivity. In a patient with pernicious anemia, the urine from stage 2 will have more radioactivity than the urine from stage 1.

SURGICAL PROCEDURES

Bone marrow transplants — Because bone marrow transplants have been perfected over the past few years, they are a viable option for patients with blood diseases. Bone marrow is aspirated from multiple sites of a donor, then transfused intravenously into the recipient. The bone marrow cells travel to the vacant marrow spaces that the disease destroyed. A major problem for bone marrow transplant recipients is rejection. The donor and recipient are screened, checked, and matched for tissue compatibility. The recipient is treated with immunosuppression drugs before surgery to help prevent complications. Infection and tissue rejection are major complications of this procedure.

Splenectomy — Surgical removal of the spleen. A splenectomy may be performed on patients with lymphomas, certain hematologic conditions, or injuries to the spleen. However, this puts patients, especially children, at an increased risk for future infections.

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ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD

VI

Name ______________________________ Score __________

OBJECTIVE 9

Plan care for the patient with disorders of the blood.

INTRODUCTION

Leukemia is a blood disorder that is evident when a faulty mechanism in the bone marrow causes a overproduction of white cells. These cells proliferate and spread to all the body's organs causing damage. Patients exhibit various signs and symptoms, and diagnosis is usually confirmed when blood tests reveal an extremely elevated level of white cells. The treatment for acute leukemia is aggressive; goals for chronic leukemia are control and maintenance. The objective is to put the disease in prolonged remission. Achieving this goal is painful and difficult for the patient and family to endure. Treatment includes drug therapy (such as chemotherapy, analgesics, sedatives, and antiemetics), bone marrow aspiration and transplants, radiation therapy, intravenous fluids, and blood transfusions.

The practical nurse has to be knowledgeable, supportive, and able to give informed advice about the disease and complications. Patients should be instructed to avoid infectious situations, because infection is the major cause of death. Reinforcing this aspect is an important part of the nurses's responsibility.

Frances Potter is a 58-year-old who has been extremely tired lately, and unable to maintain her normal activity level. Because she was afraid to tell anyone about her symptoms, she avoided going to the doctor until she fell and broke her arm. The physician ordered a routine blood test, which revealed an extremely elevated white cell count. She was admitted to the hospital for further tests. Her admitting diagnosis is possible chronic leukemia.

DIRECTIONS

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Create a plan for the care of a patient in your clinical practice or the patient in the cast study above. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Your instructor will provide a care plan form for your use.

Nursing interventions include:

- Do a complete assessment
- Monitor vital signs
- Record intake and output

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records
- Write instructions

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

- Provide oral care that does not cause gums to bleed
- Provide and teach personal care
- Provide nutritious meals that are appealing
- Encourage adequate fluid intake
- Encourage activity and balance with periods of rest
- Maintain patient comfort
- Watch for frank bleeding
- Provide calm environment and listen to patients fears
- Instruct patient to avoid infectious situations
- Provide emotional support for patient and family
- Watch for drug therapy complications
- Administer the correct prescribed medications

ASSIGNMENT SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD

VI

Name ____________________ Score ________

OBJECTIVE 10

Interpret common blood values.

INTRODUCTION

When the nurse receives blood test results from the laboratory, they should be noted, reported to the doctor, and attached to the patient's chart. Additional nursing responsibilities are to make sure the proper blood test is ordered on the correct patient and done at the prescribed time. The test results are clearly indicated on the laboratory slips, along with the normal values that are associated with each test.

DIRECTIONS

Use additional medical-surgical resources to research common blood values. Fill out the chart on the following page using test results given below.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records
- Write instructions

Data Analysis and Display
- Interpret charts and tables

Functional Math
- Solve practical problems

Test results:

Phillips, Wanda — 50-year-old female
Platelet count: 50,000/mm^3
WBC: 2000/mm^3

Jackson, Ken — 35-year-old male
RBC: 5.0 million/mm^3

Teague, Tiffany — 6-month-old female
Hct: 45%

McDonald, Brendan — 9-year-old male
WBC: 15,000/mm^3

Hart, Jeffrey — 23-year-old male
Clotting time: 14 minutes

Forenza, Ann Marie — 32-year-old female
Bleeding time: 3.5 minutes
Clotting time: 5 minutes

Patient	Patient's test result	Normal value	Normal or abnormal?

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD

ASSIGNMENT SHEET 1

Care plans should meet the following criteria:

- Nursing process followed
  - Assessment
  - Analysis (under direction of RN)
  - Planning
  - Implementation
  - Outcome/evaluation (under direction of RN)
- Check that students include the following:
  - Do a complete assessment
  - Monitor vital signs
  - Record intake and output
  - Provide oral care that does not cause gums to bleed
  - Provide and teach personal care
  - Provide nutritious meals that are appealing
  - Encourage adequate fluid intake
  - Encourage activity and balance with periods of rest
  - Maintain patient comfort
  - Watch for frank bleeding
  - Provide calm environment and listen to patients fears
  - Instruct patient to avoid infectious situations
  - Provide emotional support for patient and family
  - Watch for drug therapy complications
  - Administer the correct prescribed medications

ASSIGNMENT SHEET 2

NOTE: Students' answers for normal values may vary according to their research materials, but should be similar to those shown in the table below.

Patient	Patient's test result	Normal value	Normal or abnormal?
Phillips, W.	Platelet count: 50,000/mm^3	200,000 - 300,000/mm^3	abnormal
Phillips, W.	WBC: 2000/mm^3	5000-10,000/mm^3	abnormal
Jackson, K.	RBC: 5.0 million/mm^3	4.8 - 5.5 million/mm^3	normal
Teague, T.	Hct: 45%	35%	abnormal
McDonald, B.	WBC: 15,000/mm^3	700-1300/mm^3	abnormal
Hart, J.	Clotting time: 14 minutes	3 - 9 minutes	abnormal
Forenza, A.M.	Bleeding time: 3.5 minutes	2 - 6 minutes	normal
Forenza, A.M.	Clotting time: 5 minutes	3-9 minutes	normal

JOB
SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD

VI

Name ______________________________ Score ________

OBJECTIVE 11 **Assist with a bone marrow aspiration.**

INTRODUCTION

The physician performs a bone marrow aspiration to obtain a blood specimen for diagnostic purposes. After administering a local anesthetic, the physician inserts a sterile needle into bone and aspirates to obtain a blood or tissue specimen. This procedure is used to confirm a diagnosis; determine the numbers of erythrocytes, leukocytes and platelets, evaluate iron content; isolate pathogens; and follow a disease course. The specimen should be properly labeled and sent to the laboratory for analysis.

EQUIPMENT AND SUPPLIES

- Pen
- Worksheet
- Bone marrow puncture tray
- Lab slip
- Protective equipment

PROCEDURE

Functional Writing
- Complete forms and records

Interactive
- Communicate with clients/customers/patients

Cognitive Activities
- Collect/record information
- Create a finished product

	Yes	No
Assessment and analysis		
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Obtain signed permission.	_____	_____
4. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure.	_____	_____
2. Prepare for procedure.	_____	_____

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Job Acquisition/ Development

- Master specific job task/procedure
- Practice good work habits/attitudes

Implementation Yes No

1. Collect equipment. _____ _____

   NOTE: In most facilities a bone marrow tray is available with all equipment sterilized and ready for use.

2. Explain procedure to the patient. _____ _____
3. Wash your hands. _____ _____
4. Administer medications as prescribed. _____ _____

   NOTE: Monitor vital signs if patient is sedated.

5. Reassure the patient throughout the procedure. _____ _____
6. Assist the physician as needed. _____ _____
7. Label each specimen and send it to the lab. _____ _____
8. Ask the patient to remain quiet and to rest for a short time after the procedure. _____ _____
9. Observe the site for bleeding. _____ _____
10. Apply dry sterile dressing. _____ _____
11. Observe the site for signs of infection. _____ _____
12. Clean up:
    a. Clean reusable equipment. _____ _____
    b. Properly discard disposable equipment. _____ _____
    c. Wash your hands. _____ _____
13. Document procedure according to agency requirements. _____ _____

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	Yes	No
Evaluation		
1. Recheck puncture site in 15 minutes.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Used universal precautions	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

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EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
1 **Unskilled** – Is familiar with process, but is unable to perform job

BEST COPY AVAILABLE

JOB
SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD

VI

Name ______________________ Score __________

OBJECTIVE 12 **Monitor transfusion therapy.**

INTRODUCTION

Blood transfusions are done to introduce whole blood or blood components into the circulatory system. The purpose is to increase blood volume, to stop bleeding, to increase the oxygen-carrying blood capacity, and to combat infection. The nurse is responsible for taking vital signs, making sure the blood is dripping at the prescribed rate, and watching the patient for any complications or adverse reactions. Although the role of the PN varies according to agency, the RN is responsible for initiating the transfusion.

EQUIPMENT AND SUPPLIES

- Pen
- Work sheet
- Watch
- Stethoscope
- Thermometer

PROCEDURE

Functional Writing
- Complete forms and records

Interactive Communications
- Communicate with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Create a finished product

Assessment and analysis	Yes	No
1. Check physician's orders.	____	____
2. Identify patient.	____	____
3. Observe patient's condition; chart any changes.	____	____
Planning		
1. Reassure patient and explain procedure as each step is completed.	____	____
2. Prepare for procedure.	____	____

BEST COPY AVAILABLE

Job Acquisition/ Development

- Master specific job task/procedure
- Practice good work habits/attitudes

Implementation

		Yes	No
1.	Collect equipment.	____	____
2.	Explain procedure to the patient.	____	____
3.	Wash your hands.	____	____
4.	Check the physician's orders.	____	____
5.	Take the patient's vital signs **before the RN hangs the blood** for later comparison.	____	____
6.	Recheck the patient's vital signs at the prescribed intervals. If you find an increase in the patient's pulse, temperature, or respirations, notify the RN immediately.	____	____
	NOTE: Temperature, respirations, and pulse are checked every 15 minutes to monitor for adverse reaction. This interval may vary with individual agencies.	____	____
7.	Inspect the blood tubing for bubbles.	____	____
8.	Check the infusion site for patency and infiltration.	____	____
9.	Monitor the blood administration to make sure the blood is dripping at the prescribed rate.	____	____
10.	Watch and reassure the patient while checking administration.	____	____
11.	Notify the RN if any complications arise.	____	____
12.	Notify the RN when the blood is completely infused.	____	____

NOTE: Blood should be completely infused in at least four hours to avoid degeneration of the components.

BEST COPY AVAILABLE

	Yes	No
13. Clean up:		
a. Clean reusable equipment.	____	____
b. Properly discard disposable equipment.	____	____
c. Wash your hands.	____	____
14. Document procedure according to agency requirements.	____	____

Evaluation

1. Recheck patient in 30 minutes for comfort.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Used universal precautions	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1

BEST COPY AVAILABLE

Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training

3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required

2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill

1 **Unskilled** – Is familiar with process, but is unable to perform job

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD

VI

Name ______________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the hematologic system to their correct definitions. Write the correct letter in the blank.

_____ 1. White blood cells that protect the body from infection and produce antibodies

_____ 2. Severe itching of the skin

_____ 3. Bodies present in the blood that adhere to edges of injuries to stop bleeding

_____ 4. Red blood cells that contain hemoglobin, which carries oxygen and gives color to the blood

_____ 5. Condition of having a yellow color to skin and sclera, characteristic of some diseases

_____ 6. A condition in which the red cell count is below normal

_____ 7. Small, purplish, hemorrhagic spots on the skin

_____ 8. Withdrawing blood from a vein with a needle or through a surgical opening

a. anemia

b. aural

c. ergotrate

d. erythrocytes

e. jaundice

f. jugulum

g. leukocytes

h. leukemia

i. petechiae

j. phlebotomy

k. platelets

l. pruritus

m. sickle

n. thrombosis

May be photocopied for student use.

OBJECTIVE 2

Choose the correct word or phrase to complete statements about basic hematologic assessment. Write the correct letter in the blank.

_____ 1. When assessing the oral cavity, the nurse would note all the following EXCEPT

a. bleeding gums
b. eating difficulties
c. sore mouth or tongue
d. pruritus

_____ 2. While taking the patient's temperature, the nurse should ask if the patient

a. has difficulty breathing
b. frequently feels "cold"
c. often has a fever
d. experiences pressure or tingling

_____ 3. The nurse should assess the patient for general impressions, oral indications, respiratory status, temperature, skin condition, and

a. internal bleeding
b. head and neck movement
c. heart arrhythmias
d. bone and joint status

_____ 4. Noting petechiae, lesions, jaundice, or pallor gives the nurse input on

a. skin condition
b. general appearance
c. familial tendencies
d. musculoskeletal status

_____ 5. When assessing a patient's bone and joint status, the nurse asks if the patient experiences

a. pain
b. redness
c. tenderness
d. warmth

May be photocopied for student use

______ 6. General impressions should include input from

a. the primary care physician
b. family members
c. other nurses
d. the patient's chart

OBJECTIVE 3

Choose the correct word or phrase to complete statements about anemias. Write the correct letter in the blank.

______ 1. Vitamin B_{12} is responsible for

a. maturation of red blood cells
b. synthesizing hemoglobin
c. synthesizing red blood cells
d. production of red blood cells

______ 2. Iron-deficiency anemia may be caused by all the following EXCEPT

a. tumors
b. ulcers
c. menstrual bleeding
d. lack of intrinsic factor

______ 3. Folic acid is needed to

a. produce DNA and platelets
b. produce red blood cells
c. synthesize white blood cells
d. synthesize DNA and red blood cells

______ 4. Cravings for unusual food or nonfood substances may be seen in patients with

a. pernicious anemia
b. aplastic anemia
c. iron-deficiency anemia
d. sickle-cell anemia

______ 5. Pernicious anemia is characterized by a lack of

a. folic acid
b. iron
c. intrinsic factor
d. vitamin B_{12}

May be photocopied for student use

_____ 6. Folic acid deficiency anemia may be seen in

a. chronic alcoholics
b. drug abusers
c. overweight people
d. pregnant women

_____ 7. Aplastic anemia is characterized by

a. abnormally-shaped red blood cells
b. depression or failure of the bone marrow
c. overproduction of erythrocytes
d. overproduction of leukocytes and platelets

_____ 8. A predictable cause of aplastic anemia is

a. chronic alcoholism
b. genetic defects
c. exposure to radiation
d. poor nutrition

_____ 9. Hypovolemic anemia is a secondary anemia caused by

a. abnormally low blood volume
b. destruction of red blood cells
c. lack of intrinsic factor
d. lack of vitamin B_{12}

_____ 10. Signs and symptoms of hypovolemic anemia include

a. fever and chills
b. increased blood pressure and rapid pulse
c. painful, swollen joints
d. rapid pulse and rapid, shallow respirations

_____ 11. Acquired hemolytic anemia is characterized by

a. abnormally low blood volume
b. destruction of red blood cells
c. lack of intrinsic factor
d. lack of vitamin B_{12}

May be photocopied for student use.

OBJECTIVE 4

Choose the correct word or phrase to complete statements about leukemia. Write the correct letter in the blank.

_____ 1. Acute myelogenous leukemia is characterized by a large number of

a. abnormal leukocytes
b. immature leukocytes
c. mature leukocytes
d. platelets

_____ 2. Those affected by acute myelogenous leukemia are commonly

a. adolescents
b. middle-aged and older adults
c. young children
d. young children and older adults

_____ 3. Signs and symptoms of acute myelogenous leukemia include

a. anemia and bleeding of mucous membranes
b. anorexia and weight loss
c. bone pain
d. splenomegaly

_____ 4. Chronic myelogenous leukemia is characterized by the presence of

a. lymph node enlargement
b. reddish-purple hue to skin
c. the Philadelphia chromosome
d. splenomegaly

_____ 5. Those affected by chronic myelogenous leukemia are commonly

a. adolescents
b. middle-aged and older adults
c. young children
d. young children and older adults

_____ 6. Signs and symptoms of chronic lymphocytic leukemia include

a. bone pain
b. bleeding of mucous membranes
c. reddish-purple hue to skin
d. splenomegaly

May be photocopied for student use

_____ 7. Patients with chronic lymphocytic leukemia who are _______ are given supportive treatment only

a. asymptomatic
b. in the blastic phase
c. not anemic
d. on chemotherapy

OBJECTIVE 5

Choose the correct word or phrase to complete statements about clotting disorders. Write the correct letter in the blank.

_____ 1. DIC is defined as a

a. sex-linked characteristic
b. destruction of platelets
c. destruction of the bone marrow
d. pathological response to disease or injury

Rocky Wilder is a 60-year-old man with a history of alcoholism. Today he was admitted to the intensive care unit with frank bleeding from his rectum. He states that he has been taking several aspirins a day during the last month for chronic headaches and that he has had several drinks today. Rocky's admitting diagnosis is thrombocytopenia.

Questions 2-3 apply to the above situation.

_____ 2. The nurse notes symptoms that include

a. fatigue, irritability, pruritus
b. numbness, tingling, petechiae
c. swollen lymph glands, diarrhea, poor appetite
d. bleeding tendencies, petechiae, easy bruising

_____ 3. Health care management for Rocky will include

a. administer salicylates for headaches
b. discontinue aspirin and alcohol
c. transfusions of whole blood
d. antineoplastic drugs

_____ 4. DIC may be caused by

a. congenital defect
b. nonsteroidal anti-inflammatory agents
c. radiation therapy
d. shock

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_____ 5. Health care management for patients with DIC includes

a. genetic counseling
b. discontinue causative drugs
c. transfusion replacement
d. prevent injury

_____ 6. Thrombocytopenia may be caused by

a. blood loss
b. genetic factors
c. serious burns
d. shock

_____ 7. Signs and symptoms of DIC include

a. headaches
b. bleeding from mucous membranes
c. heavy bleeding between menses
d. vision abnormalities

OBJECTIVE 6

Choose the correct word or phrase to complete statements about polycythemia. Write the correct letter in the blank.

_____ 1. Patients with polycythemia vera have a(n)

a. excessive production of erythrocytes, granulocytes, and platelets
b. increased blood flow
c. insufficient number of red blood cells
d. deficiency of clotting factors

_____ 2. Health care management for patients with polycythemia vera includes

a. antibiotics
b. phlebotomy therapy
c. iron supplements
d. infusions of clotting factor

_____ 3. Signs and symptoms of polycythemia vera include

a. easy bruising
b. bleeding into joints or intracranial areas
c. spontaneous hematomas of soft tissues
d. pruritus, nosebleeds, and ecchymoses

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_____ 4. The teaching plan for a patient with polycythemia vera should include a discussion of

a. genetic counseling
b. need for a low-purine diet
c. signs of extremity thromboses
d. hemorrhage prevention

OBJECTIVE 7

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the blood. Write the correct letter in the blank.

_____ 1. Sickle-cell anemia is characterized by

a. lack of red blood cell formation
b. abnormal RBCs
c. abnormal platelets and red blood cells
d. inadequate bone marrow function

_____ 2. Hemophilia is characterized by all the following EXCEPT

a. prolonged coagulation time
b. pathological response to injury
c. persistent bleeding
d. genetic transmission

_____ 3. Thalassemia is a chronic, incurable, hereditary type of

a. aplastic anemia
b. hemolytic anemia
c. hypovolemic anemia
d. iron deficiency anemia

_____ 4. Signs and symptoms of thalassemia include

a. abnormal bleeding
b. painful, swollen joints
c. frequent infections
d. jaundice, pallor, or brown skin pigmentation

_____ 5. Complications associated with sickle cell anemia include:

a. congestive heart failure
b. liver damage
c. multisystems failure
d. pathologic fractures

May be photocopied for student use

_____ 6. Symptoms of sickle cell anemia include:

a. abnormal bleeding, frequent infections
b. decreased urinary output
c. dyspnea and fatigue on exertion
d. low grade fever, loss of appetite

_____ 7. Signs and symptoms of acute lymphocytic leukemia include

a. nausea and vomiting
b. jaundice
c. ecchymosis
d. pathological fractures

OBJECTIVE 8

Choose the correct word or phrase to complete statements about transfusion therapy. Write the correct letter in the blank.

_____ 1. When patients are transfused with whole blood, they receive

a. fresh-frozen plasma proteins
b. all blood components
c. plasma and blood components
d. combination of red blood cells and granulocyte

_____ 2. Red blood cells are given to patients who have

a. chronic anemia
b. fewer immunological problems
c. increased antibodies
d. few white cells and platelets

_____ 3. Platelets are given to patients to

a. activate the clotting mechanism
b. prevent ABO incompatibility
c. prevent infection and fluid depletion
d. activate the bone marrow

_____ 4. Granulocytes are combined with red blood cells and given to treat

a. chronic anemia, liver disease
b. leukemia, aplastic anemia
c. infections, bone marrow suppression
d. clotting defects, hypovolemia

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_____ 5. The fluid portion of blood is given to treat

a. liver disease, chronic anemia
b. aplastic anemia, leukemia
c. bone marrow suppression, infections
d. hypovolemia, clotting defects

_____ 6. Plasma proteins consist of

a. hemoglobin and granulocyte
b. plasma and blood components
c. albumin and globulins
d. fresh-frozen plasma and platelets

NOTE: Objectives 9-12 are evaluated on job sheets/assignment sheets in this unit. If you have not completed these components, see your instructor.

May be photocopied for student use

WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD

VI

OBJECTIVE 1

1. g
2. l
3. k
4. d
5. e
6. a
7. i
8. j

OBJECTIVE 2

1. d
2. b
3. d
4. a
5. a
6. b

OBJECTIVE 3

1. a
2. d
3. b
4. c
5. c
6. a
7. b
8. c
9. a
10. d
11. b

OBJECTIVE 4

1. b
2. d
3. a
4. c
5. b
6. d
7. a

OBJECTIVE 5

1. d
2. d
3. b
4. d
5. c
6. a
7. b

OBJECTIVE 6

1. a
2. b
3. d
4. c

OBJECTIVE 7

1. b
2. b
3. b
4. d
5. c
6. d
7. b

OBJECTIVE 8

1. b
2. a
3. a
4. c
5. d
6. c

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE UPPER GASTROINTESTINAL SYSTEM

VII

INTRODUCTION

A close relationship exists between proper nutrition and the structures of the upper GI tract. Proper care of the mouth and gums aids in proper digestion. Adequate nutrition contributes to healthy mucosa and ultimately aids in preventing diseases and disorders associated with the upper GI system. Discomfort in the mouth and esophagus adversely affects the patient's ability to eat.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I.*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the upper GI and the associated nursing process. In addition, you will be able to write care plans and perform basic procedures for patients with these disorders. You will demonstrate these competencies by completing Assignment Sheets, Job Sheets, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the upper GI tract to their correct definitions.

2. Choose the correct word or phrase to complete statements about gastric tubes and their uses.

3. Choose the correct word or phrase to complete statements about diseases and disorders of the oral cavity.

4. Choose the correct word or phrase to complete statements about diseases and disorders of the esophagus.

5. Choose the correct word or phrase to complete statements about diseases and disorders of the stomach.

6. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the upper GI system.

7. Choose the correct word or phrase to complete statements about eating disorders.

8. Plan care for the patient with disorders of the upper GI system. (Assignment Sheet 1)

9. Plan care for the patient experiencing gastric surgery. (Assignment Sheet 2)

10. Assist a patient with an upper GI disorder in dietary management. (Assignment Sheet 3)

11. Develop a teaching plan for a patient with a disorder of the upper GI system. (Assignment Sheet 4)

12. Perform gastrostomy/gavage feeding and assess gastric residual. (Job Sheet)

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objectives 1 and 2, the first two groupings, including basic information that supports the rest of the unit and gastric tubes and their uses;

  Part 2 — Objectives 3-5, the next three groupings, including diseases and disorders of the oral cavity, esophagus, and stomach; and

  Part 3 — Objectives 6 and 7, the next two groupings, including pediatric diseases and disorders and eating disorders.
- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a guest speaker to discuss diseases and disorders of the upper GI tract.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.
- Obtain models and large pictures of the upper GI tract.
- Make a poster of diseases and disorders of the upper GI tract.
- Make a bulletin board showing diseases and disorders of the upper GI tract.
- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration
  - Assist students to conduct a chapter service project on diseases and disorders of the upper GI tract.
  - Develop objectives for service project and identify a theme.
  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.
  - Plan a community or school health project that involves disseminating pamphlets about disorders and diseases of the upper GI tract, nutrition and oral hygiene.
  - Develop and/or participate in a community teaching project that involves diseases and disorders of the upper GI system.
- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.
- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the upper GI tract to their correct definitions.

- Discuss terms associated with diseases and disorders of the upper GI tract.
- Have students play reinforcement games and work crossword puzzles using terms.
- Have a spelling bee using words in this unit.
- Read and discuss all the words that the students brought to class.
- Have the students present their words to the class.

Objective 2: Choose the correct word or phrase to complete statements about gastric tubes and their uses.

- Gather together various tubes, both those mentioned and others which relate to use with diseases and disorders of the upper GI tract. Demonstrate their uses.

Objective 3: Choose the correct word or phrase to complete statements about diseases and disorders of the oral cavity.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the oral cavity.
- Have students share ideas that might be helpful in evaluating diseases and disorders of the oral cavity.
- Discuss other diseases and disorders not mentioned in this unit.
- Discuss ways in which people can avoid problems associated with the oral cavity; incorporate these ideas into patient care and teaching.
- Discuss ways in which nurses could improve the care of patients with diseases and disorders of the oral cavity. Incorporate ideas which aid in patient comfort.

Objective 4: Choose the correct word or phrase to complete statements about diseases and disorders of the esophagus.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the esophagus.
- Have students share ideas that might be helpful in evaluating diseases and disorders of the esophagus.
- Discuss other diseases and disorders not mentioned in this unit.

Objective 5: Choose the correct word or phrase to complete statements about diseases and disorders of the stomach.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the stomach.
- Have students share ideas that might be helpful in evaluating diseases and disorders of the stomach.
- Discuss other diseases and disorders not mentioned in this unit.
- Discuss complications of gastric surgery, such as dumping syndrome.

Objective 6: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the upper GI system.

- Have students share relevant incidents about friends or family members who have problems related to pediatric diseases and disorders of the upper GI system.

- Have students share ideas that might be helpful in evaluating pediatric diseases and disorders of the upper GI system.

- Discuss other diseases and disorders not mentioned in this unit.

Objective 7: Choose the correct word or phrase to complete statements about eating disorders.

- Have students share relevant incidents about friends or family members who have problems related to eating disorders.

- Have students share ideas that might be helpful in evaluating eating disorders.

- Discuss other disorders not mentioned in this unit.

APPLICATION

- Make a skit or video having to do with patient care of a person with problems associated with the upper gastrointestinal system. Either the students or the teachers can be presenters.

- Students can practice care of the patient with problems associated with this unit.

- Have students present a one-minute speech on care of a patient with problems associated with the upper gastrointestinal system.

Objective 8: Plan care for the patient with disorders of the upper GI system. (Assignment Sheet 1)

- Use Assignment Sheet 1 to give students practice planning care for the patient with disorders of the upper GI system.

- Provide a care plan form for student's use.

Objective 9: Plan care for the patient experiencing gastric surgery. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give students practice planning care for the patient experiencing gastric surgery.

- Provide a care plan form for student's use.

Objective 10: Assist a patient with an upper GI disorder in dietary management. (Assignment Sheet 3)

- Use Assignment Sheet 3 to give students practice assisting a patient with an upper GI disorder to select appropriate foods.

- Invite the dietician to talk about diets associated with problems of the GI system.

- Use an actual case study or the following scenario:

  Mrs. Robinson is a 58-year-old homemaker. She has been suffering with a hiatal hernia for about 10 years. She has been raising several of her grandchildren and has been reluctant to seek medical advice, saying that she "doesn't have the time or money." Her husband recently convinced her to see an internist, who diagnosed her hiatal hernia and recommended that she follow a bland diet and lose 30 pounds.

Objective 11: Develop a teaching plan for a patient with a disorder of the upper GI system. (Assignment Sheet 4)

- Use Assignment Sheet 4 to give students practice developing a teaching plan for a patient with a disorder of the upper GI system.

- Invite a pharmacist to talk about medications associated with problems of the GI tract, their potential side effects and potential harm for patients who have GI problems.

Objective 12: Perform gastrostomy/gavage feeding and assess gastric residual. (Job Sheet)

- Use the Job Sheet to give students hands-on experience in assessing gastric residual and performing a gastrostomy/ gavage feeding.

- Use a mannequin to practice and demonstrate procedures in the classroom.

EVALUATION

Pretest

- Use the Written Test as a pretest.

- Determine individual study requirements from pretest results.

- Counsel students individually on pretest results and study requirements.

- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.
- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- Give the Written Test.

  NOTE: The Written Test may be given in sections if desired.
- Complete appropriate section of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.
- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *American Institute for Cancer Research Newsletter*. 1759 R. Street, N.W., Washington, D.C. 20009.

- *University of California Berkeley Wellness Letter.* 48 Shattuck Square, Suite 43, Berkeley, Ca. 94704-1140.
- *Tufts University Diet and Nutrition Letter.* 53 Park Place, New York, N.Y. 10007.

UNIT REFERENCES

- Betz, Cecily Lynn, and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis and Doris Smith Suddarth, *Textbook of Medical-Surgical Nursing*, fifth edition. Philadelphia: J.B. Lippincott Co., 1984.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing.* St. Louis: Mosby Year-Book, Inc., 1991.
- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.
- *OK Diet Manual* (8th ed.). Oklahoma Dietetic Association, 1987.
- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing. Philadelphia*: W.B. Saunders Company, 1990.
- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.
- Yannes-Eyles, Mary, *Comprehensive Review of Practical Nursing*, (10th ed.). St. Louis: The C. V. Mosby Company, 1990.

OBJECTIVE 1

Match terms associated with diseases and disorders of the upper GI tract to their correct definitions.

- **carcinoma** — A growth of malignant tissue
- **dysphagia** — Difficulty swallowing
- **eructation** — Producing gas from the stomach
- **flatulent** — Producing gas from the intestines
- **halitosis** — Offensive breath
- **hyperalimentation** — Intravenous infusion of a hypertonic solution
- **peristalsis** — Progressive wave of movement occurring involuntarily in hollow body tubes
- **obstruction** — A blockage which prevents normal functioning
- **tortuous** — Marked by repeated twists, bends, and turns
- **ulceration** — An open sore or lesion on the mucous membranes that sometimes forms pus
- **varices (singular *varix*)** — Distended, swollen, knotted veins

OBJECTIVE 2

Choose the correct word or phrase to complete statements about gastric tubes and their uses.

Tubes are used to administer gavage feedings, obtain gastric analysis, to lavage, and to aspirate gastric contents.

- **Nasogastric tube** — Inserted through the nose to the stomach; often a Salem sump (double lumen) or Levin tube (single lumen).
- **Orogastric tube** — Inserted through the mouth and into the stomach.
- **Gastrostomy tube (PEG tube)** — Surgically inserted through an opening directly into the stomach.

- **Sengstaken-Blakemore tube** — A three-lumen tube used in the treatment of ruptured esophageal varices. One lumen leads to the stomach for gastric lavage, one lumen leads to a gastric balloon, and one lumen leads to an esophageal balloon. The gastric and esophageal balloons are inflated and press against the varices to control bleeding.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about diseases and disorders of the oral cavity.

Description and etiology

Leukoplakia — Abnormal thickening and whitening of the epithelium of the mucous membranes of the cheeks or vagina. Oral leukoplakia occurs most commonly in men between the ages of 50 and 70, especially smokers.

Causes

- External irritants (physical, thermal, chemical)

Health care management

- Lesions may be surgically removed or treated with radiation
- Provide meticulous oral hygiene for patients with oral leukoplakia
- Lesions may develop into squamous cell carcinoma; red patches are more likely to become malignant than white patches
- Surgeries: excision, electrodesiccation

ASSESSMENT

Signs and symptoms

Leukoplakia

- Thickened white or reddish lesion on mucous membrane of mouth or vagina
- Lesions cannot be rubbed off

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

LEUKOPLAKIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Patients may need to use alternate feeding and communication methods after oral surgery
• Continually monitor patient's condition	• Patients who smoke should be observed closely for any changes
• Plan for patient's discharge	• Prepare teaching plan • Discuss removing sources of irritation (smoking, ill-fitting dentures, etc.) as a preventive measure

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Oral cancer — Malignant lesions may develop on the lips, oral cavity, tongue, and pharynx. Most cancers of the mouth are squamous cell carcinomas, but basal cell carcinomas may also occur. People with AIDS may develop Kaposi's sarcoma in the oral cavity.

Causes

- High alcohol consumption
- Tobacco use
- External irritants

Health care management

- Treatment depends on the size of the lesion and the extent of involvement in surrounding tissues — treatment may be palliative only
- Radiation therapy

- Rehabilitation may be required after surgery
- Surgeries: excision, glossectomy, hemiglossectomy, mandibulectomy, laryngectomy, neck dissection, thalamotomy, tracheostomy

ASSESSMENT

Oral cancer

Signs and symptoms

- Leukoplakia
- Swelling, edema
- Numbness
- Difficulty in speaking
- Pain in ear(s), teeth, or face
- Sore throat
- Dysphagia
- Ulceration
- Salivation

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ORAL CANCER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide supportive care • Administer medications • Give pre- and postoperative care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss prevention of future lesions — Help patients make plans for rehabilitation, if necessary

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Stomatitis — An inflammation of the mouth.

Causes

- Trauma
- Pathogenic organisms
- Irritants such as hot or spicy foods, tobacco, or alcohol
- Nutritional deficiency
- Disease (such as cancer or end-stage renal disease)
- Chemotherapy

Health care management

- Pain relief
- Remove or correct causative factor
- Provide proper oral hygiene
- Medications: topical anesthetics, antibiotics

ASSESSMENT

Stomatitis

Signs and symptoms

- Swelling
- Heat
- Pain
- Ulcerations of mucous membranes

Description and etiology

Gingivitis — Inflammation of the gums.

Causes

- Improper mouth and gum care
- Poorly fitting dentures
- Nutritional deficiency

Health care management

- Good dental hygiene
- Prevention is important
- Complications: periodontal disease

ASSESSMENT

Gingivitis

Signs and symptoms

- Red, swollen, bleeding gums

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

STOMATITIS and GINGIVITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide meticulous mouth care • Provide soft, bland diet; no spicy foods
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss the importance of mouth and gum care in preventing disease

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Herpes simplex type I (cold sore or fever blister) — An infection affecting the lips and mucous membranes of the mouth; sometimes associated with stress or in conjunction with other infections.

Causes

- Herpes simplex virus (HSV)

Health care management

- Symptomatic relief
- Patient education to prevent spreading virus to others
- Medications: antiviral agents, analgesics

ASSESSMENT

Signs and symptoms

Herpes simplex
- Vesicle on mouth, nose, or lips (cold sore or fever blister)
- Malaise
- Edema of surrounding area

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

HERPES SIMPLEX

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions
Check medication record	
Collect equipment	
Promote healing	Administer medications Provide symptomatic relief Keep lesions dry
Continually monitor patient's condition	
Plan for patient's discharge	Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION
- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 4 **Choose the correct word or phrase to complete statements about diseases and disorders of the esophagus.**

Description and etiology **Esophagitis** — Inflammation of the esophagus.

Causes
- Reflux of stomach contents
- Irritants such as chemicals, alcohol or hot liquids

- Fungal infection
- Trauma
- Malignancy
- Repeated vomiting
- Intubation or surgery

Health care management

- Pain relief
- Treat underlying cause
- Frequent small meals of bland, low-residue foods
- Avoid very hot foods, milk, coffee, salicylates
- Dilation therapy
- Medications: antacids, histamine blockers (cimetidine, ranitidine)

ASSESSMENT

Signs and symptoms

Esophagitis

- Heartburn
- Pain
- Dysphagia with sensation of food "sticking" in throat
- Symptoms may be aggravated by recumbent position

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ESOPHAGITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide soft, bland diet
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Esophageal varices** — Tortuous, distended vessels of the esophagus which may rupture or bleed. Rupture may be precipitated by coughing, vomiting, or straining. A ruptured varix is a medical emergency.
Causes	• Portal hypertension caused by cirrhosis of the liver
Health care management	• Sengstaken-Blakemore tube may be used to control hemorrhage. • Blood transfusions • Iced saline lavage • Medications: vasopressin, antibiotics, analgesics • Surgeries: ligation, portacaval anastomosis • Complications: hypovolemia, aspiration pneumonia, impaired gas exchange

ASSESSMENT — **Signs and symptoms**

Esophageal varices

- Hematemesis
- Hemorrhage from upper GI tract
- Black, tarry stools (from swallowed blood)
- Rectal bleeding
- Pain
- Hypovolemia, shock

ANALYSIS — Report findings to RN who will assimilate information for analysis and nursing care.

ESOPHAGEAL VARICES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care as necessary • Administer blood transfusions • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Monitor tube placement
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Cancer of the esophagus — Benign tumors of the esophagus are rare. Ninety percent of esophageal cancers are squamous cell carcinomas. Because of the esophagus's extensive lymphatic network and proximity to other body structures, this type of cancer is usually diagnosed at a late stage. Treatment is generally palliative.

Risk factors

- Achalasia (lack of peristaltic activity in the esophagus)
- Genetic factors
- Trauma from exposure to alcohol, tobacco, hot liquids, spicy foods
- Reflux esophagitis

Health care management

- Palliative treatment
- Radiation therapy
- Medications: analgesics, antiemetics, antacids, antineoplastic agents
- Surgeries: excision, esophagectomy, esophagogastrostomy, esophagoenterostomy, gastrostomy

ASSESSMENT

Cancer of the esophagus

Signs and symptoms

- Progressive dysphagia, feeling that food is "sticking" in throat
- Painful swallowing
- Weight loss
- Vomiting
- Hoarseness
- Coughing
- Iron-deficiency anemia
- Occult bleeding or obvious hemorrhage

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CANCER of the ESOPHAGUS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide diet high in calories, vitamins, and protein • Provide pre- and postoperative care • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Esophageal diverticulum — Outpouching or protrusion of the mucosa. Food or liquids may collect in the pouch, eventually being regurgitated.

Causes

- Weakened portion of esophageal muscle
- Achalasia (lack of peristaltic activity in the esophagus)

Health care management

- Surgery is indicated when symptoms are severe
- Surgeries: diverticulectomy, myotomy
- Complications: pulmonary complications, perforation or herniation of diverticulitum

ASSESSMENT **Signs and symptoms**

Esophageal diverticulum

- Dysphagia with sensation of food "sticking" in throat
- Halitosis
- Foul, sour taste in mouth
- Coughing, belching, regurgitating of food
- Weight loss
- Hoarseness

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

ESOPHAGEAL DIVERTICULITUM

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care as necessary • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Instruct patient to eat slowly and chew food thoroughly

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Hiatus (hiatal) hernia — Protrusion of part of the stomach through a defect in the diaphragm wall where the esophagus passes through the diaphragm.

Causes

- Obesity
- Congenital weakness
- Trauma

Health care management

- Half of patients are asymptomatic and do not require treatment
- High protein, low fat diet to help control heartburn
- Patient should sleep with head of bed elevated and avoid eating 1-2 hours before bedtime
- Patient should not smoke
- Medications: antacids
- Surgeries: gastropexy, fundoplication

ASSESSMENT

Signs and symptoms

Hiatus hernia

- Heartburn
- Dysphagia
- Substernal pressure after eating

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HIATUS HERNIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide high protein, low fat diet • Administer medications • Provide pre- and postoperative care as necessary
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Emphasize proper diet — Patient should avoid lying supine after eating and sleep with head elevated

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about diseases and disorders of the stomach.

Description and etiology

Gastritis — Inflammation of the stomach lining. Damage to the gastric mucosa allows acid and pepsin to come into contact with gastric tissues. Gastritis may be acute or chronic — chronic gastritis is usually associated with underlying disease, such as a peptic ulcer or pernicious anemia.

Causes

- Infection
- Irritants (alcohol, chemicals, certain foods)
- Radiation
- Drugs (salicylates, indomethacin, steroids, sulfonamides)

- Trauma
- Renal or respiratory failure
- Damage from bile salts or pancreatic enzymes
- Stress

Health care management

- Symptoms may be absent, mild, or severe
- Mild symptoms may be relieved by antacids, belching, defecation, rest
- Chronic gastritis may be controlled by avoidance of spicy or greasy foods
- Severe cases require replacement of fluid and electrolytes
- Medications: antacids, antiemetics, antibiotics, cimetidine, ranitidine, sucralfate, anticholinergics, vitamin B_{12}, sedatives
- Complications (seen in gastritis caused by corrosive substances): perforation, shock, obstruction, constriction

ASSESSMENT

Signs and symptoms

Gastritis

- Abdominal pain
- Nausea and vomiting, hematemesis
- Anorexia
- Feeling of fullness
- Tarry stool
- Epigastric discomfort or pain

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

GASTRITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Check for use of salicylates, indomethacin, steroids, sulfonamide
• Collect equipment	
• Promote healing	• Provide clear liquid or bland diet as tolerated • Administer medications • Encourage rest
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss avoidance of precipitating factors

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Ulcer — A loss of tissue in the lower esophagus, stomach, or duodenum. Increased amounts of gastric juices and pepsin come in contact with the mucosa. Lesions appear on the mucosa from the action of digestive juices and pepsin. A *stress ulcer* is an acute ulcer caused by extreme stress, such as burns (Curling's ulcer) or trauma. Stress ulcers develop 24 to 48 hours after the stressful event.

Causes

- Genetic factors
- Smoking
- Drugs (nonsteroidal anti-inflammatory agents, glucocorticoids, salicylates, reserpine, aminophylline, phenylbutazone)
- Stress

Health care management

- Pain relief
- Prevention is important
- Patient should eat several small meals per day and avoid foods that cause pain or distress
- Rest and stress prevention
- Iced saline lavage
- Medications: antacids, histamine blockers (cimetidine, ranitidine), sucralfate, anticholinergics
- Surgeries: subtotal gastrectomy, total gastrectomy, vagotomy, pyloroplasty, esophagogastroduodenoscopy with cautery
- Complications: perforation, hemorrhage, pyloric obstruction

ASSESSMENT

Signs and symptoms

- Gnawing, burning, pain in the epigastric region, radiating to the back, that is relieved by food or antacids
- Nausea and vomiting
- Heartburn

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ULCERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Check for use of medications that may cause or exacerbate ulcers
• Collect equipment	
• Promote healing	• Administer medications (do not administer antacids concurrently with cimetidine or sucralfate) • Provide non-stressful environment • Provide pre- and postoperative care as necessary • Encourage rest

• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss avoiding factors that exacerbate symptoms, such as smoking and caffeine — Discuss prevention — Help plan ways to avoid stress — Contact physician if black, tarry stool is noted

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NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Cancer of the stomach — Gastric tumors are usually malignant. The most common type is adenocarcinoma, which tends to be found in the distal third of the stomach.

Risk factors

- Atrophic gastritis
- Pernicious anemia
- Gastric ulcer
- Polyps
- Achlorhydria (lack of free hydrochloric acid)

Health care management

- Chemotherapy and radiation therapy if metastasis has occurred
- Patient may be malnourished; total parenteral nutrition may be required before surgery is possible
- Medications: analgesics, antineoplastic agents
- Surgeries: subtotal gastrectomy, total gastrectomy

ASSESSMENT

Signs and symptoms

Cancer of the stomach	**NOTE:** Symptoms often appear late in disease or not at all • Heartburn • Gastric distress • Anorexia • Flatulence • Weight loss • Pain in advanced stages
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

CANCER of the STOMACH

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide supportive care • Administer medications
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan — Encourage the patient to eat a bland, high-calorie diet

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the upper GI system.

Description and etiology

Cleft lip/cleft palate — A congenital defect caused by failure of the embryonic facial structures to fuse together. The defect may be unilateral or bilateral, and ranges from mild to severe. Patients may have a cleft lip, cleft palate, or both.

Causes

- Unknown

Health care management

- The child has difficulty sucking and may be fed with a special nipple or feeding device while sitting upright; tube feedings may be required
- The nurse can help parents adjust to their baby's appearance by showing acceptance of the baby
- Prevent infection
- Surgical correction is performed as soon as possible
- Medications: antibiotics
- Surgeries: reconstructive surgery
- Complications: increased risk of ear infections or aspiration

ASSESSMENT

Signs and symptoms

- Cleft lip
  - Mild — notch in vermillion border
  - Severe — opening from mouth to nose
- Cleft palate
  - Opening in roof of mouth

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CLEFT LIP and CLEFT PALATE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Feed baby in upright position • Provide pre- and postoperative care • Administer medications • Provide emotional support for parents • Show acceptance of infant • Promote and maintain bonding • Prevent infection
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — If surgery is delayed, instruct parents on special care and feeding requirements — Prevent damage to suture line

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Esophageal atresia** — Congenital deformation of the esophagus. The esophagus does not develop into a continuous passage between the pharynx and stomach. There are five types of this disorder. The most common is type III: the proximal segment of the esophagus is a blind pouch; the distal segment of the esophagus is connected to the trachea by a fistula.
Causes	• Unknown

NOTE: Long-term ventilator use can cause a type of esophageal atresia.

Health care management

- Discontinue oral feedings immediately
- Keep infant positioned with head and chest elevated
- Medications: antibiotics
- Surgeries: anastomosis, bronchoscopy with dilation
- Complications: aspiration pneumonia, infection, dehydration, electrolyte imbalance

ASSESSMENT

Esophageal atresia

Signs and symptoms

- Excessive drooling
- Coughing, choking, and cyanosis when feeding
- Fluid returns through nose and mouth when feeding

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ESOPHAGEAL ATRESIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Administer feedings • Provide supportive care to patient and family • Administer medications
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss symptoms that should be reported to the physician (especially signs of bleeding) — Give special feeding instructions

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Hypertrophic pyloric stenosis** — Congenital hypertrophy of the pyloric muscle. This progressive hypertrophy prevents the stomach from emptying normally.
Causes	• Unknown
Health care management	• Restore hydration and electrolyte balance • Thickened ("weighted") formulas be may given • Keep child in upright position after feeding • Surgeries: Fredet-Ramstedt procedure • Complications: dehydration, electrolyte imbalance, poor nutritional status, alkalosis, infection
ASSESSMENT	**Signs and symptoms**
Hypertrophic pyloric stenosis	• Vomiting that increases in frequency and intensity, becoming projectile • Constipation • Signs of dehydration • Weight loss or failure to gain weight • Extreme hunger • Decreased urinary output • Pyloric mass ("olive") felt on palpation
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

HYPERTROPHIC PYLORIC STENOSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide supportive care for patient and family • Provide pre- and postoperative care • Use proper feeding and positioning techniques
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Give special feeding instructions

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Marasmus** — Failure to thrive due to lack of caloric intake.
Causes	• Inadequate food intake • Malabsorption • Diarrhea
Health care management	• Nutrition must be increased gradually • Complications: impaired brain development

ASSESSMENT	**Signs and symptoms**
Marasmus	• Wasted muscles • Loss of subcutaneous fat • Loose, sagging skin • Weakness • Irritability (usually seen in infants) • Lethargy (usually seen in older children)
Description and etiology	**Kwashiorkor** — Failure to thrive due to lack of protein. The affected child may be receiving adequate calories.
Causes	• Lack of protein in diet
Health care management	• Dietary therapy • Complications: mental deficiency, liver enlargement, increased risk of infection
ASSESSMENT	**Signs and symptoms**
Kwashiorkor	• Lethargy and apathy • Failure to grow • Diarrhea • Loss of appetite • Distended abdomen • Changes in skin and hair pigmentation
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

MARASMUS and KWASHIORKOR

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide adequate nutrition
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Refer family to social services if necessary — Discuss parenting techniques — Provide nutrition instructions

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology	**Poisoning** — Thousands of children die from accidental poisonings every year. Poisons may be ingested, inhaled, or absorbed through the skin. Poisoning is a medical emergency.
Causes	• Varies
Health care management	• Determine the type of poison • Contact a poison control center for specific antidote information, if needed • Prevention is important — poisonous substances should be kept out of children's reach • Administer antidote, if any

- Do not induce vomiting if the child is comatose, semiconscious, or convulsing; or if the poison is corrosive
- Use gastric lavage unless contraindicated
- Give water to dilute the poison unless the poison is a drug
- Monitor vital signs and I/O
- Medications: syrup of ipecac (**not** tincture of ipecac), activated charcoal, dimercaprol
- Complications: cardiac arrest, pulmonary edema, pneumonia, renal failure, esophageal strictures

ASSESSMENT

Signs and symptoms

Poisoning

- Nausea and vomiting
- Abdominal pain
- Anorexia
- Diarrhea
- Cramping
- Convulsions
- Dilated or pinpoint pupils
- Unconsciousness
- Skin rashes, burns, or irritation
- Cyanosis
- Stains around mouth
- Dyspnea

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

POISONING

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Determine causative agent • Contact poison control center • Administer antidote, if known • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Weigh patient • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss prevention — Discuss emergency procedures — Caregivers should post phone number of nearest poison control center

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 7

Choose the correct word or phrase to complete statements about eating disorders.

Description and etiology

Anorexia nervosa — An eating disorder that involves self-starvation. This disorder usually occurs in adolescent girls, although it can affect males and females of all ages. Patients with anorexia nervosa do not actually lose their appetites. They are often extremely hungry and preoccupied with thoughts of food. They fear becoming fat and have an inaccurate image of their own bodies.

Causes

- Unknown

Health care management

- Psychotherapy for the patient and family

- Increased food intake
- For uncontrollable patients, parenteral feedings may be required

ASSESSMENT

Anorexia nervosa

Signs and symptoms

- Extreme weight loss (up to 40% of body weight)
- Denial of weight loss or eating problem
- Dry skin
- Lanugo on back and extremities
- Amenorrhea
- Alopecia

Description and etiology

Bulimia — An eating disorder that involves cycles of binging and purging. This disorder usually affects adolescent girls, although it can affect men and women of all ages. Bulimics eat a large amount of high-calorie food, then vomit or use laxatives to purge. Unlike anorexia nervosa, patients with bulimia are aware that their eating habits are abnormal and out of control.

Causes

- Unknown

Health care management

- Psychotherapy for patient and family
- Improved food intake

ASSESSMENT

Bulimia

Signs and symptoms

- Weight loss
- Secretiveness about eating; patient may go to bathroom immediately after eating to purge
- Irregular menstrual periods
- Enlarged parotid glands
- In advanced cases, tooth damage caused by vomiting

ANALYSIS | Report findings to RN who will assimilate information for analysis and nursing care.

ANOREXIA NERVOSA and BULIMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with parenteral feedings if necessary • Incorporate healthy diet
• Continually monitor patient's condition	• Weight patient daily • Monitor vital signs, I/O
• Plan for patient's discharge	• Encourage family to seek counseling • Refer family to psychotherapist

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

DIAGNOSTIC PROCEDURES

Endoscopic exams — Examining an organ through an instrument. The physician looks through the eyepiece of the instrument and can inspect the organ to be visualized. Biopsies are sometimes performed during this procedure.

Esophagogastroduodenoscopy (EGD) — Using a fiberoptic scope to visualize the esophagus, stomach, and duodenum.

Esophagoscopy — Visualizing the esophagus by means of a fiberoptic scope.

Gastric analysis — Aspiration and study of stomach contents.

Gastroscopy — Visualizing the stomach by means of a fiberoptic scope.

Radiographic studies — The use of x-rays to visualize the entire gastrointestinal tract.

Occult blood test — A chemical test used to detect occult blood in feces or gastric secretions.

Upper gastrointestinal study (upper GI series or UGI) — The UGI series of tests consists of x-rays of the lower esophagus, stomach, and duodenum. Barium sulfate is used as the contrast medium. This study is used to detect tumors, ulcerative lesions, and other abnormal conditions.

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SURGICAL PROCEDURES

Anastomosis — Surgical joining of two tubular structures; used to connect remaining structures after resectioning or to correct a missing connection.

Cardiomyotomy — Myotomy of the cardiac sphincter muscle; used to treat achalasia.

Diverticulectomy — Excision of a diverticulum.

Electrodesiccation — Use of an electric current to remove tissue and control bleeding. Local anesthesia is usually used. Electrodesiccation may be used after curettage to stop bleeding.

Esophagectomy — Excision of all or a section of the esophagus.

Esophagoenterostomy — Anastomosis forming a connection between the esophagus and intestine after total gastrectomy.

Esophagogastrostomy — Anastomosis forming a connection between the esophagus and stomach; used after esophagectomy or to correct congenital defect.

Esophagomyotomy — Myotomy of the esophagus.

Fredet-Ramstedt procedure — Myotomy of the pyloric sphincter, used to correct pyloric stenosis.

Fundoplication — Reducing the size of the opening from the esophagus into the stomach and suturing the stomach into place.

Gastrectomy — Removal of all or part of the stomach.

Gastric partitioning — Reducing the size of the stomach by applying staples; used to control morbid obesity.

Gastropexy — Suturing the stomach to the abdominal wall; used to keep the stomach in place.

Gastrostomy — Surgical insertion of a tube through the abdominal wall into the stomach. Patients who cannot eat, because of esophageal cancer or other diseases, are fed through the tube.

Glossectomy — Total excision of the tongue.

Hemiglossectomy — Excision of part of the tongue.

Laser ligation — Using a laser to create a ligature around a structure.

Mandibulectomy — Surgical removal of the mandible.

Myotomy — Surgical division of a muscle.

Pyloroplasty — Surgical procedure to stretch the pylorus, increasing the size of the opening.

Thalamotomy — Destruction of part of the thalamus.

Vagotomy — Section of the vagal nerve. Severing this nerve reduces the amount of gastric acids.

ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE UPPER GASTROINTESTINAL SYSTEM

VII

Name ______________________________ Score ________

OBJECTIVE 8

Plan care for the patient with disorders of the upper GI system.

INTRODUCTION

In this assignment sheet you are given a case study of a hypothetical patient. Care plans are essentially research projects for each of your patients. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care.

Mr. Encapera is a 43-year-old who was laid off from his job several months ago. Although he has a peptic ulcer, Mr. Encapera smokes and drinks several cups of coffee per day. He was admitted to the hospital with a bleeding peptic ulcer.

DIRECTIONS

Mr. Encapera is your patient. Your instructor will provide a care plan form for your use in planning his care. Use additional medical-surgical resources to determine the procedures and support care appropriate for your patient.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE UPPER GASTROINTESTINAL SYSTEM

VII

Name ______________________________ Score __________

OBJECTIVE 9

Plan care for the patient experiencing gastric surgery.

INTRODUCTION

The patient who is admitted for gastric surgery may have been suffering for a long time with abdominal pain, and often has undergone extensive testing and taken many medications to relieve the problem. The nurse's responsibility will not only entail taking care of the physical needs, but also the emotional needs of the patient.

Supportive care and teaching will be essential elements in the nurse's responsibility before surgery. Although physicians explain the procedures in detail, patients are often nervous and cannot grasp the full extent of the discussion.

Marta Steiner is a 72-year-old who was admitted to the hospital for a gastroenterostomy. Although her doctor has given her a full explanation of the procedure, Ms. Steiner asks you to explain it again.

DIRECTIONS

Mrs. Steiner is your patient. Your instructor will provide a care plan form for your use. Use additional medical-surgical resources to determine the procedures and support care appropriate for your patient.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

ASSIGNMENT SHEET 3

APPLY THE NURSING PROCESS TO THE CARE OF THE UPPER GASTROINTESTINAL SYSTEM

VII

Name ______________________________ Score __________

OBJECTIVE 10

Assist a patient with an upper GI disorder in dietary management.

INTRODUCTION

If you are in a clinical situation, your instructor will assign a patient to you and you will assist that patient with the selection of appropriate foods for his or her upper GI disorder or disease.

If you are in a classroom situation, your instructor will provide a case study for you to complete the same assignment.

DIRECTIONS

Using your dietary/nutritional textbook, prepare a diet appropriate for the patient or case assigned to you. Base your diet on the management guidelines for your patient's disease or disorder. List appropriate food choices and the rationale for each choice. Assist patient in selecting a diet from among these foods. Depending on your patient's condition, factors to consider may include:

- Maximum or minimum caloric intake
- High or low residue foods
- Avoidance of hot or spicy foods
- Avoidance of caffeine, alcohol, or tobacco
- Refraining from lying down immediately after eating
- Eating small, frequent meals
- Maximum or minimum intake of fats, protein, or carbohydrates

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Operation and Calculation
- Calculate with whole numbers

Life Science
- Investigate health issues

Oral Presentation
- Make informative presentations

Interactive Communications
- Give/follow oral directions
- Communicate with clients/customers/ patients

General Relating
- Interact with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

Patient ______________________________

Room ______________________________

Doctor ______________________________

Diagnosis ______________________________

MEAL	FOODS	RATIONALE
Breakfast		
Snack		
Lunch		
Snack		

Dinner

Snack

Comments or other considerations:

ASSIGNMENT SHEET 4

APPLY THE NURSING PROCESS TO THE CARE OF THE UPPER GASTROINTESTINAL SYSTEM

VII

Name ______________________________ Score ________

OBJECTIVE 11

Develop a teaching plan for a patient with a disorder of the upper GI system.

INTRODUCTION

Hiatal hernias are very common. Most people with a hiatal hernia are unaware of them. Although congenital defect is the main cause, trauma or disease can cause, contribute to, or aggravate this condition.

Major treatment consists of proper diet management and maintaining optimal weight. The practical nurse has to be knowledgeable in dietary needs and must be able to support and give informed advice about diet and weight loss.

In addition to nutritional management, the patient with a hiatal hernia must:

- Sleep with the head of the bed elevated 6 inches
- Take antacids
- Eat frequent, small meals
- Refrain from lying down for at least 30 minutes after eating
- Reduce weight if needed

DIRECTIONS

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Use a dietary handbook and additional medical-surgical resources to complete a teaching plan for a patient with a hiatal hernia.

1. What will you do to prepare the patient for the teaching session?

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

2. What materials, supplies, or equipment will you need?

3. Outline the teaching plan below.

   Preventive measures

   Dietary considerations

4. Other comments or considerations for this patient.

ASSIGNMENT SHEETS 1 and 2

Care plans should meet the following criteria:

- Nursing process followed
  - — Assessment
  - — Analysis (under direction of RN)
  - — Planning
  - — Implementation
  - — Outcome/evaluation (under direction of RN)
- Problem stated appropriately
- Nursing actions/interventions include discharge planning

ASSIGNMENT SHEET 3

Check that foods listed in the diet are appropriate for the patient's diagnosis and rationale is complete.

ASSIGNMENT SHEET 4

1. The nurse should consider the following factors:
   - Are there any distractions in the room?
   - Does the patient need glasses?
   - Does the patient feel uncomfortable or need to use the bathroom?
   - Is there sufficient lighting?
   - What is the patient's level of education?
2. - Dietary handbook
   - Books, pictures, and additional printed information about the disease
   - Pencil and paper for patient to make notes
3. Teaching plan should include the following:
   - Preventive measures
     - — If obese, weight reduction diet
     - — Sleep with the head of the bed elevated 6 inches
     - — Take antacids

  - Refrain from lying down for at least 30 minutes after eating
  - Frequent small meals

- Dietary considerations

  - Foods to avoid because they may cause pressure of the esophageal sphincter or irritation of the mucosa:

    Black, red, and green pepper
    Chili powder
    Alcohol
    Chocolate and cocoa
    Caffeine (tea, coffee, cola)
    Tomato and tomato juice
    Citrus juices
    Peppermint
    Excessive fatty foods

  - Avoid vegetables from the cabbage family
  - Avoid onion and dried beans
  - Eat small meals slowly
  - Use caffeine-free beverages
  - Take medications according to directions
  - Drink 6-8 glasses of water daily to aid digestion
  - To prevent irritation of the mucosa, avoid food and fluids that are extremely hot or cold.

4. Check that answers are appropriate to the patient's needs.

APPLY THE NURSING PROCESS TO THE CARE OF THE UPPER GASTROINTESTINAL SYSTEM

Name ______________________________ Score ________

OBJECTIVE 12

Perform gastrostomy/gavage feeding and assess gastric residual.

INTRODUCTION

A feeding tube is inserted directly into the stomach to administer nutrients to patients with dysphagia, obstructions, or trauma; to unconscious patients who have undergone gastrointestinal tract surgery; and to patients who have other conditions that prevent oral feeding. Gavage feeding is contraindicated for patients with a paralytic ileus and suspected intestinal obstruction. Commercial feeding sets are available with a variety of liquid nutrient solutions. The solution must be brought to room temperature before feeding. A Salem sump can be used, but a flexible, weighted feeding tube is usually preferred. Solutions are instilled intermittently or continuously at a very slow rate. The feeding tube's placement in the stomach must be verified according to institutional policy. A common schedule is every four hours for patients with continuous feeding, or before each feeding for patients with intermittent feeding.

EQUIPMENT AND SUPPLIES

- Towel or pad protection
- Feeding formula at room temperature
- Graduated containers
- 50 ml water
- Large-tip syringe (such as catheter tip or Toomey tip)
- Adapters, if needed
- 50 ml syringe
- Stethoscope
- Gloves

Additional equipment for continuous infusion:

- Gavage bag with tubing and flow regulator clamp
- Infusion controller, bag, and tubing set
- Adapter to connect gavage tubing to feeding tube

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PROCEDURE

Functional Reading
- Interpret forms and records

Functional Writing
- Complete forms and records

Functional Math
- Make measurements

Life Science
- Investigate/apply principles of anatomy/physiology

Interactive Communications
- Communicate with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
Assessment and analysis		
1. Check physician's orders.	____	____
2. Identify the patient.	____	____
3. Observe patient's condition; chart any changes.	____	____
Planning		
1. Reassure patient and explain procedure as each step is completed.	____	____
2. Prepare for feeding.	____	____
Implementation		
1. Collect equipment.	____	____
2. Wash your hands.	____	____
3. Place towel or protective pad across patient's neck and chest area.	____	____
4. Raise the patient's bed to a comfortable working height.	____	____
5. Elevate the head of the bed to a semi-Fowler's position.	____	____
6. Remove the cap from the feeding tube.	____	____
7. Put on gloves.	____	____
8. Check patency and position:		
a. Use the syringe to inject 5 to 10 cc of air into the tube.	____	____
b. At the same time, hold the stethoscope over the stomach and listen for a whooshing sound.	____	____
c. Aspirate stomach contents to confirm proper placement of the tube.	____	____

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⚠ **WARNING:** DO NOT give a gavage feeding unless positive tube placement is confirmed. Feeding through a misplaced tube can cause fluid to enter the lungs.

Yes No

9. Pour gastric contents into graduated container and assess for color, amount, and consistency. _____ _____

10. For intermittent feeding:

    a. Pinch off the feeding tube, remove the bulb or piston from the syringe, and attach the syringe to the feeding tube. _____ _____

    b. Fill the syringe with formula. _____ _____

    c. Release the feeding tube to allow the formula to flow through the tube. _____ _____

    d. Hold the syringe 12" above the patient's chest until the feeding is completed. _____ _____

    NOTE: The height at which you hold the syringe determines the rate of flow.

    For continuous feeding:

    a. Connect the gavage tubing bag to the feeding tube. _____ _____

    NOTE: An adapter may be necessary.

    b. Prime the tubing by filling it with formula to remove air. _____ _____

    c. Hang the bag 12" above the patient's stomach. _____ _____

    d. Remove the clamp on the gavage bag tubing and adjust the infusion controller. _____ _____

11. To prevent air from entering the stomach, add more formula when the syringe or bag is three-quarters empty. _____ _____

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⚠ **WARNING: Do not allow the syringe to empty completely before feeding is completed or air will enter the tube, causing stomach distention.**

Yes No

12. Continue feeding until directed amount has been administered. _____ _____

NOTE: Doctor's orders will determine the amount of formula.

13. When feeding is complete, flush syringe or tubing by adding 30-60 ml of water. _____ _____

NOTE: Flushing the tube removes excess formula that could harden and block the tube.

14. Replace the cap on the feeding tube. _____ _____

15. For intermittent feeding, leave the patient in a semi-Fowler's position for 30 minutes. For continuous feeding, continue to observe patient's response to feeding. _____ _____

16. Clean up:

    a. Clean reusable equipment. _____ _____

    b. Properly discard disposable equipment. _____ _____

    c. Wash your hands. _____ _____

17. Document procedure according to agency requirements. _____ _____

Evaluation

1. Recheck patient after 30 minutes and reposition patient for comfort. _____ _____

2. Check gastric residual according to agency policy _____ _____

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(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Followed doctor's orders	4	3	2	1
Properly checked tube placement	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Used universal precautions	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

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PERFORMANCE EVALUATION KEY

4 **Skilled** — Can perform job with no additional training
3 **Moderately Skilled** — Has performed job during training program; limited additional training may be required
2 **Limited Skill** — Has performed job during training program; additional training is required to develop skill
1 **Unskilled** — Is familiar with process, but is unable to perform job

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WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE UPPER GASTROINTESTINAL SYSTEM

VII

Name ______________________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the upper GI tract to their correct definitions. Write the correct letters in the blanks.

_____ 1. Producing gas from the stomach

_____ 2. Progressive wave of movement occurring involuntarily in hollow body tubes

_____ 3. A growth of malignant tissue

_____ 4. Difficulty swallowing

_____ 5. Producing gas from the intestines

_____ 6. An open sore or lesion on the mucous membranes that sometimes forms pus

_____ 7. Offensive breath

_____ 8. Intravenous infusion of a hypertonic solution

_____ 9. A blockage which prevents normal functioning

_____ 10. Marked by repeated twists, bends, and turns

_____ 11. Distended, swollen, knotted veins

a. carcinoma
b. dyskinesia
c. dyspepsia
d. dysphagia
e. effusion
f. eructation
g. flatulent
h. granulocyte
i. halitosis
j. hematemesis
k. hyperalimentation
l. inflammation
m. neoplasm
n. obstruction
o. peristalsis
p. tortuous
q. ulceration
r. varices

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OBJECTIVE 2

Choose the correct word or phrase to complete statements about gastric tubes and their uses. Write the correct letters in the blanks.

_____ 1. A tube inserted through the nose into the stomach is called a

   a. gastrostomy tube
   b. nasogastric tube
   c. orogastric tube
   d. Sengstaken-Blakemore tube

_____ 2. A tube inserted through the mouth into the stomach is called a

   a. gastronomy tube
   b. nasogastric tube
   c. orogastric tube
   d. Sengstaken-Blakemore tube

_____ 3. A tube inserted through a surgical opening into the stomach is called a

   a. gastrostomy tube
   b. Levin tube
   c. orogastric tube
   d. Sengstaken-Blakemore tube

_____ 4. A three-lumen tube used to treat ruptured esophageal varices is called a

   a. gastrostomy tube
   b. Levin tube
   c. nasogastric tube
   d. Sengstaken-Blakemore tube

OBJECTIVE 3

Choose the correct word or phrase to complete statements about diseases and disorders of the oral cavity. Write the correct letters in the blanks.

_____ 1. A vesicle on the mouth, nose, or lips is a symptom of

   a. gingivitis
   b. herpes simplex type I
   c. leukoplakia
   d. stomatitis

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_____ 2. Abnormal patches of white, thickened tissue in the epithelium are symptoms of

a. gingivitis
b. herpes simplex type I
c. leukoplakia
d. stomatitis

_____ 3. Gingivitis is caused by

a. improper mouth and gum care
b. tumors
c. halitosis
d. virus or fungal infection

_____ 4. Irritants such as hot foods, alcohol, or tobacco may cause

a. herpes simplex type I
b. gingivitis
c. halitosis
d. stomatitis

_____ 5. Red, swollen, bleeding gums are symptoms of

a. gingivitis
b. oral cancer
c. oral tumors
d. stomatitis

_____ 6. Your patient, who often eats highly spiced food, is hospitalized for swelling, redness and pain in the mouth. The patient MOST LIKELY has

a. stomatitis
b. oral cancer
c. herpes simplex
d. gingivitis

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Your patient is a cigarette smoker who has been admitted to the hospital with a diagnosis of leukoplakia. Surgery is scheduled to remove the lesions. Questions 7-9 apply to this patient.

_____ 7. In your assessment the patient's condition, you will observe

a. swelling, odor, bleeding, and blisters
b. edema and redness of the mucous membranes
c. complaints of pain
d. thickened white or reddish lesions

_____ 8. In your plan to promote healing, you will include

a. providing antibiotics and antiemetics
b. checking the patient's urine specimen
c. using alternate feeding and communication methods
d. providing hot liquids

_____ 9. Your teaching plan for this patient will include:

a. discuss the importance of mouth and gum care in preventing disease
b. instruct the patient to keep lesions dry
c. discuss removing sources of irritation
d. teach patient to use medications

OBJECTIVE 4

Choose the correct word or phrase to complete statements about diseases and disorders of the esophagus. Write the correct letters in the blanks.

_____ 1. Irritants such as chemicals, alcohol, or hot liquids can cause

a. esophagitis
b. esophageal varices
c. esophageal diverticulum
d. laryngitis

_____ 2. Health care management for the patient with esophagitis should include

a. radiation therapy
b. encourage patient to drink warm fluids
c. frequent small meals of bland, low-residue foods
d. iced saline lavage

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_____ 3. Health care management for the patient with esophageal varices should include

- a. radiation therapy
- b. encourage patient to drink warm fluids
- c. frequent small meals of bland, low-residue foods
- d. iced saline lavage

_____ 4. Infections of the esophagus may result in

- a. esophagitis
- b. esophageal varices
- c. esophageal diverticulum
- d. laryngitis

_____ 5. Medications for patients with cancer of the esophagus include

- a. antibiotics
- b. antiemetics
- c. vasopressin
- d. histamine blockers

_____ 6. Mrs. Jackson complains of a sour taste in her mouth. As you complete your assessment, you note that she has severe halitosis. You suspect she could have

- a. Esophageal varices
- b. Esophageal diverticulum
- c. Tumors
- d. Esophagitis

Louis Albright is a 67-year-old man who came to the emergency room after vomiting blood. His daughter, who drove him to the hospital, tells you that he "had too much to drink last night and has been throwing up all morning." She says his doctor told him his drinking has "damaged his liver." Mr. Albright is admitted with a diagnosis of ruptured esophageal varices.

Questions 7-10 apply to the above situation.

_____ 7. Mr. Albright's varices may have ruptured because of his

- a. drinking
- b. liver damage
- c. mental stress
- d. vomiting

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_____ 8. Medications for Mr. Albright will include

a. antiemetics, antibiotics
b. analgesics, antibiotics
c. vasopressin, analgesics
d. vasopressin, antibiotics

_____ 9. Complications that Mr. Albright may suffer include

a. aspiration pneumonia
b. laryngitis
c. peptic ulcer
d. reflux esophagitis

_____ 10. As part of your care plan for Mr. Albright, you would include

a. assist with parenteral feedings
b. monitor tube placement
c. provide soft, bland diet
d. remove sources of irritation

_____ 11. Occult bleeding, dysphagia, and hoarseness are symptoms of

a. esophageal cancer
b. esophageal varices
c. laryngitis
d. achalasia

_____ 12. Complications of esophageal diverticulitum include

a. aspiration pneumonia
b. esophageal cancer
c. herniation
d. laryngitis

_____ 13. Health care management for the patient with esophageal diverticulitum should include

a. histamine blockers and antacids
b. radiation therapy
c. provide high fiber, high residue foods
d. surgery for severe symptoms

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_____ 14. The teaching plan for patients with a hiatus hernia should include

a. instruct patient to eat slowly and chew food thoroughly
b. discuss the importance of mouth and gum care
c. emphasize proper diet
d. teach patient to use medications

_____ 15. A hiatus hernia is characterized by a defect allowing the stomach to protrude

a. into the esophagus
b. into the duodenum
c. through the diaphragm
d. through the pylorus

_____ 16. After eating, a patient with a hiatus hernia should avoid

a. antacids
b. lying supine
c. elevating the head
d. stress

OBJECTIVE 5

Choose the correct word or phrase to complete statements about diseases and disorders of the stomach. Write the correct letter in the blank.

_____ 1. Gastritis is defined as

a. inflammation of the stomach lining
b. loss of tissue in the stomach
c. narrowing of the pyloric sphincter
d. obstruction of the esophagus

_____ 2. An ulcer is defined as

a. inflammation of the stomach lining
b. loss of tissue in the stomach
c. narrowing of the pyloric sphincter
d. obstruction of the esophagus

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_____ 3. Signs and symptoms of gastritis include

a. heartburn
b. dizziness
c. hematemesis
d. flatulence

_____ 4. Mild gastritis symptoms may be relieved by

a. chewing food thoroughly
b. antacids, belching, or defecating
c. ice water lavage
d. sleeping with the head elevated

_____ 5. Medications for an ulcer include

a. antiemetics
b. histamine blockers
c. salicylates
d. aminophylline

_____ 6. Signs and symptoms of an ulcer include

a. burning pain that is not relieved by food or antacids
b. esophageal hemorrhage and bloody stools
c. feeling of fullness
d. nausea, vomiting, and heartburn

_____ 7. Patients with an ulcer should eat

a. bland foods
b. foods that are not excessively hot or cold
c. several small meals per day
d. one hour after taking antacids

_____ 8. Stress ulcers develop _________ after a stressful event.

a. 1 to 2 hours
b. 10 to 15 hours
c. 24 to 48 hours
d. 36 to 72 hours

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_____ 9. Symptoms of cancer of the stomach include

a. anorexia, heartburn, and weight loss
b. peptic ulcers
c. distended abdomen
d. nausea and vomiting

_____ 10. The most common stomach cancers tend to occur in which area of the stomach?

a. fundus
b. distal third
c. cardiac sphincter
d. all areas

OBJECTIVE 6

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of upper GI system. Write the correct letters in the blanks.

_____ 1. Surgical correction of a cleft lip or palate is performed

a. as soon as possible
b. in utero
c. when the child is 2-4 months old
d. when the child weighs at least 25 pounds

_____ 2. Signs and symptoms of esophageal atresia include

a. anorexia
b. coughing and cyanosis when feeding
c. hematemesis and bloody stools
d. constipation

_____ 3. Infants with esophageal atresia should be positioned

a. supine
b. in Trendelenburg's position
c. in Sim's position
d. with the head and chest elevated

_____ 4. Signs and symptoms of hypertrophic pyloric stenosis include

a. hematemesis and bloody stools
b. projectile vomiting and weight loss
c. excessive drooling
d. increased urinary output

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_____ 5. Complications of hypertrophic pyloric stenosis include

a. colitis
b. cardiac problems
c. dehydration
d. peptic ulcer

_____ 6. Marasmus is defined as a failure to thrive due to

a. anorexia
b. inadequate protein intake
c. inadequate calorie intake
d. excessive vomiting

_____ 7. Signs and symptoms of marasmus include

a. anorexia
b. nausea and projectile vomiting
c. musty smelling urine and sweat
d. wasted muscles and loss of subcutaneous fat

_____ 8. Kwashiorkor is defined as a failure to thrive due to

a. anorexia
b. inadequate protein intake
c. inadequate calorie intake
d. excessive vomiting

_____ 9. Signs and symptoms of kwashiorkor include

a. lethargy and failure to grow
b. nausea and vomiting
c. wasted muscles and loss of subcutaneous fat
d. constipation

_____ 10. When treating a poisoned child, give water unless the poison is

a. corrosive
b. petroleum-based
c. a drug
d. liquid

_____ 11. Inducing a poisoned child to vomit is contraindicated if the poison is

a. corrosive
b. lead-based
c. a drug
d. liquid

May be photocopied for student use.

OBJECTIVE 7

Choose the correct word or phrase to complete statements about eating disorders. Write the correct letters in the blanks.

_____ 1. Patients with anorexia nervosa lose weight because of

a. binging and purging
b. loss of appetite
c. malabsorption
d. self-starvation

_____ 2. Patients with bulimia lose weight because of

a. binging and purging
b. loss of appetite
c. malabsorption
d. self-starvation

_____ 3. Health care management for patients with anorexia nervosa may include

a. antacids
b. gastric lavage
c. parenteral feedings
d. radiation therapy

_____ 4. Signs and symptoms of anorexia nervosa include

a. lanugo on back and extremities
b. loss of appetite
c. tooth damage
d. enlarged parotid glands

_____ 5. When planning for the discharge of a patient with anorexia nervosa or bulimia, you should

a. recommend genetic counseling for parents
b. encourage family to seek counseling
c. teach patient to use medications
d. discuss prevention methods

NOTE: Objectives 8-12 are evaluated on Job Sheets/Assignment Sheets in this unit. If you have not completed these components, see your instructor.

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WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE UPPER GASTROINTESTINAL SYSTEM

VII

OBJECTIVE 1

1.	f	6.	q	11.	r
2.	o	7.	i		
3.	a	8.	k		
4.	d	9.	n		
5.	g	10.	p		

OBJECTIVE 2

1.	b
2.	c
3.	a
4.	d

OBJECTIVE 3

1.	b	6.	a
2.	c	7.	d
3.	a	8.	c
4.	d	9.	c
5.	a		

OBJECTIVE 4

1.	a	6.	b	11.	a	16.	b
2.	c	7.	d	12.	c		
3.	d	8.	d	13.	d		
4.	a	9.	a	14.	c		
5.	b	10.	b	15.	c		

OBJECTIVE 5

1.	a	6.	d
2.	b	7.	d
3.	c	8.	c
4.	b	9.	a
5.	b	10.	b

OBJECTIVE 6

1.	a	6.	c	11.	a
2.	b	7.	d		
3.	d	8.	b		
4.	b	9.	a		
5.	c	10.	c		

OBJECTIVE 7

1.	d
2.	a
3.	c
4.	a
5.	b

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

VIII

INTRODUCTION

Organs of the lower abdominal cavity aid in digestion, breakdown, and absorption of nutrients essential for human life. The liver is the largest and most vital organ in the lower gastrointestinal system. Other organs depend on it to filter waste products and direct them into the bile, which is stored in the gallbladder. These waste products are then directed into the intestines. The body's homeostasis suffers when there is a malfunction of these organs.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the lower GI system and the associated nursing processes. In addition, you will be able to plan care for and perform basic procedures for patients with these disorders. You will demonstrate these competencies by completing Assignment Sheets, Job Sheets, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the lower GI system to their correct definitions.
2. Choose the correct word or phrase to complete statements about diseases and disorders of the small intestines.
3. Choose the correct word or phrase to complete statements about diseases and disorders of the large intestines.
4. Choose the correct word or phrase to complete statements about anorectal diseases and disorders.
5. Choose the correct word or phrase to complete statements about diseases and disorders of the liver, pancreas, and gallbladder.
6. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the lower GI system.
7. Assist a patient with lower GI disorder to select appropriate foods. (Assignment Sheet 1)

8. Plan care for the patient with disorders of the lower GI system. (Assignment Sheet 2)

9. Plan care for the patient experiencing colon surgery pre- and postoperative. (Assignment Sheet 3)

10. Plan care for the patient experiencing gallbladder or biliary surgery pre- and postoperative. (Assignment Sheet 4)

11. Develop a teaching plan for a patient with a disorder of the lower GI system. (Assignment Sheet 5)

12. Provide care for a patient with an ostomy. (Job Sheet 1)

13. Perform colostomy irrigation. (Job Sheet 2)

14. Perform guaiac testing. (Job Sheet 3)

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM *VIII*

PREPARATION

- Review unit and plan presentation.

- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.

- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 – Objective 1, basic information that supports the rest of the unit;

  Part 2 – Objectives 2 and 3, the next two groupings, including diseases and disorders of the small and large intestines;

  Part 3 – Objectives 4 and 5, the next two groupings, including anorectal, liver, pancreas, and gallbladder diseases and disorders; and

  Part 4 – Objective 6, including pediatric disorders.

- Review teaching suggestions and plan classroom activities.

- Determine how you will schedule time for students to demonstrate competence in the required procedures.

- Obtain materials to supplement unit.

- Invite a guest speaker to discuss disorders and diseases of the lower GI tract.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.

- Obtain models and large pictures of the lower GI tract.

- Make a poster of disorders and diseases of the lower GI tract.

- Make a bulletin board showing disorders and diseases of the lower GI tract.

- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration

  - Assist students to conduct a chapter service project on disorders and diseases of the lower GI tract.

  - Develop objectives for service project and identify a theme.

  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.

  - Plan a community or school health project that involves disseminating pamphlets about disorders and diseases of the lower GI tract, nutrition, and oral hygiene.

  - Develop and/or participate in a community teaching project that involves diseases and disorders of the lower GI system.

- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.

- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the lower GI system to their correct definitions.

- Discuss terms associated with disorders and diseases of the lower GI system.

- Have students play reinforcement games and work crossword puzzles using terms.

- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about diseases and disorders of the small intestines.

- Review anatomy and physiology of the small intestines.

- Discuss ways in which people can avoid problems associated with the small intestines; incorporate these ideas into patient care and teaching.

- Have students share relevant incidents about friends or family members who have problems related to diseases of the small intestines.

- Have students share ideas that might be helpful in evaluating diseases of the small intestines.

- Discuss ways in which nurses could improve the care of patients with diseases and disorders of the small intestines. Incorporate ideas which aid in patient comfort.

Objective 3: Choose the correct word or phrase to complete statements about diseases and disorders of the large intestines.

- Review anatomy and physiology of the large intestines.

- Have students share relevant incidents about friends or family members who have problems related to diseases of the large intestines.

- Have students share ideas that might be helpful in evaluating diseases of the large intestines.

- Have students complete Assignment Sheets 1, 2, and 3.

- Have students research diseases of the large intestines and present them to the class.

Objective 4: Choose the correct word or phrase to complete statements about anorectal diseases and disorders.

- Review anatomy and physiology of the anorectal structures.

- Have students share relevant incidents about friends or family members who have problems related to anorectal diseases.

- Have students share ideas that might be helpful in evaluating anorectal diseases.

Objective 5: Choose the correct word or phrase to complete statements about diseases and disorders of the liver, pancreas, and gallbladder.

- Review anatomy and physiology of the liver, pancreas, and gallbladder.

- Have students share relevant incidents about friends or family members who have problems related to diseases of the liver, pancreas, and gallbladder.

- Have students share ideas that might be helpful in evaluating diseases of the liver, pancreas, and gallbladder.

- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the lower GI system. Incorporate ideas into patient care.

Objective 6: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the lower GI system.

- Have students share relevant incidents about friends or family members who have problems related to pediatric diseases and disorders of the lower GI system.
- Have students share ideas that might be helpful in evaluating pediatric diseases of the lower GI system.
- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the lower GI system. Incorporate ideas into patient care.

APPLICATION

- Make a skit or video having to do with patient care of a person with problems associated with the lower GI system. Either the students or the teachers can be the presenters.
- Students can practice care of the patient with problems associated with this unit.
- Have students present a one-minute speech on care of a patient with problems associated with the lower GI system.

Objective 7: Assist a patient with a lower GI disorder to select appropriate foods. (Assignment Sheet 1)

- Use Assignment Sheet 1 to give students an opportunity to practice ideas that will help when they talk to the patient about appropriate foods.
- Use an actual case study or the following scenario:

  Ellen Davison is a 49-year-old nurse who has been suffering with ulcerative colitis for about 10 years. She has been taking care of her elderly mother for 5 years. Ellen is periodically relieved of the total responsibility when one of her grown children come to the house to stay for the day. She has not been sticking to her diet or taking her medications as prescribed, and she needs help in selecting the proper foods for her condition. She saw her doctor yesterday and was advised to seek dietary assistance.
- Invite a dietician to talk about diets associated with problems of the GI system.

Objective 8: Plan care for the patient with disorders of the lower GI system. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give the students an opportunity to practice ideas that will help when they plan care for a patient with disorders of the lower GI system.

- Have the students practice care of the patient with a lower GI problem. Pick any of the problems associated with this unit.

- Provide a care plan form for students' use.

Objective 9: Plan care for the patient experiencing colon surgery pre- and postoperative. (Assignment Sheet 3)

- Use Assignment Sheet 3 to give students practice planning care for the patient experiencing duodenal and colon surgery.

- Have students think about potential problems that could arise with pre- or postoperative patients: talk about emergency measure and preventative measures.

- Provide a care plan form for students' use.

Objective 10: Plan care for the patient experiencing gallbladder or biliary surgery pre- and postoperative. (Assignment Sheet 4)

- Use Assignment Sheet 4 to give students practice planning care for the patient experiencing surgery.

- Have students think about potential problems that could arise with pre or post op patients; talk about emergency measures and preventative measures.

- Provide a care plan form for students' use.

Objective 11: Develop a teaching plan for a patient with a disorder of the lower GI system. (Assignment Sheet 5)

- Use Assignment Sheet 5 to give students practice developing a teaching plan for a patient with a disorder of the lower GI system.

- Invite a pharmacist to talk about medications associated with problems of the GI tract, their potential side effects and potential harm for patients who have GI problems.

- Divide the class into groups; have each group come up with one idea that would be helpful to tell a person with a disorders of the lower GI system.

- Make a bulletin board for the classroom of ideas pertaining to information contained in this unit.

Objective 12: Provide care for a patient with an ostomy. (Job Sheet 1)

- Use Job Sheet 1 to give students hands-on experience in providing care for a patient with an ostomy.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 13: Perform colostomy irrigation. (Job Sheet 2)

- Use Job Sheet 2 to give students hands-on experience in performing colostomy irrigation.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 14: Perform gualac testing. (Job Sheet 3)

- Use Job Sheet 3 to give students hands-on experience in performing guaiac testing.
- Use a mannequin to practice and demonstrate procedures in the classroom.

EVALUATION

Pretest

- Use the Written Test as a pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.
- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.
- Give the Written Test.

  NOTE: The Written Test may be given in sections if desired.
- Complete appropriate section of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.
- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *American Institute for Cancer Research Newsletter.* 1759 R. Street, N.W., Washington, D.C. 20009
- *University of California Berkeley Wellness Letter.* 48 Shattuck Square, Suite 43, Berkeley, Ca. 94704-1140.
- *Tufts University Diet and Nutrition Letter.* 53 Park Place, New York, N.Y. 10007.

UNIT REFERENCES

- Betz, Cecily Lynn and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis and Doris Smith Suddarth, *Textbook of Medical-Surgical Nursing*, fifth edition. Philadelphia: J.B. Lippincott Co., 1984.

- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St. Louis: Mosby Year-Book, Inc., 1991.

- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.

- *OK Diet Manual* (8th ed.). Oklahoma Dietetic Association, 1987.

- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing. Philadelphia*: W.B. Saunders Company, 1990.

- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.

- Yannes-Eyles, Mary, *Comprehensive Review of Practical Nursing*, (10th ed.). St. Louis: The C. V. Mosby Company, 1990.

OBJECTIVE 1

Match terms associated with diseases and disorders of the lower GI system to their correct definitions.

- **ascites** — Abnormal collection of fluid in the abdominal cavity
- **ataxia** — Lack of muscle coordination
- **enteric** — Pertaining to the intestines
- **fetid** — Having a rank or foul odor
- **ileum** — Distal part of the small intestines
- **paralytic ileus** — Paralysis of the intestinal wall
- **tenesmus** — Spasmodic contraction of the anal sphincter with a constant desire to empty the bowel
- **vermiform** — Worm-like structure, such as the appendix.

OBJECTIVE 2

Choose the correct word or phrase to complete statements about diseases and disorders of the small intestines.

Description and etiology

Crohn's disease (regional enteritis) — Chronic inflammation of the bowel; most common in young adults. Any area of the GI system can be affected, but the most common sites are the terminal ileum, cecum, and ascending colon. All tissue layers are involved. Granulomas form on the mucosa, progressing to ulcerations and scar tissue. Patients go through periods of exacerbation, which may be aggravated by stress.

Causes

- Unknown

Health care management

- Stress relief
- High-calorie, high-protein diet; avoidance of milk products and very spicy foods
- Total parenteral nutrition may be needed in severe cases
- Medications: sulfonamides, azathioprine, antibiotics, antidiarrheal agents
- Surgeries: colectomy, colostomy

ASSESSMENT | **Signs and symptoms**

Crohn's disease

- Diarrhea
- Pain in right lower quadrant
- Lethargy
- Anorexia
- Weight loss
- Pus or mucus in stool
- Anemia

ANALYSIS | Report findings to RN who will assimilate information for analysis and nursing care.

CROHN'S DISEASE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide diet high in calories, protein, and vitamins • Administer medications • Provide supportive care • Provide pre- and postoperative care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor and assess bowel sounds • Observe for complications • Observe for electrolyte imbalance
• Plan for patient's discharge	• Prepare teaching plan — Discuss diet therapy — Discuss stress reduction — Emphasize the need to continue taking medications, even if asymptomatic

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.

- Contribute to plan of care update.

Description and etiology

Peritonitis — Inflammation of all or part of the *peritoneum*, the membrane that surrounds the abdominal cavity. Different factors are responsible for allowing contaminants into the peritoneal cavity. Peritonitis is a serious condition that can cause death if not treated.

Causes

- Perforated appendix or intestine
- Ulceration
- Abscessed diverticula
- Neoplasm
- Surgery (failure to use sterile technique)
- Trauma

Health care management

- Bed rest
- Treat underlying condition
- Medications: antibiotics

ASSESSMENT

Signs and symptoms

Peritonitis

- Increasingly severe abdominal pain
- Abdomen becomes rigid and tender; patient typically lies on back with knees drawn up to relax abdominal muscles
- Nausea and vomiting
- Fever and chills
- Shallow respirations
- Peristalsis ceases, causing constipation

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PERITONITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide supportive care • Provide pre- and postoperative care • Place patient in semi-Fowler's position • Avoid jarring or quick movements when turning or lifting patient to prevent intense abdominal pain • Have patient turn, cough, and deep breathe q 2 h
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor and assess bowel sounds
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Hernia — A protrusion of the intestines through a weakness in the abdominal wall. Hernias can develop through the umbilicus, the inguinal area in the groin, the femoral canal, and incisional areas following surgery. Hernias may be *reducible* (the protrusion can be pushed back into the abdomen) or *irreducible*.

Causes

- Trauma
- Lifting of heavy objects
- Pregnancy
- Congenital defect
- Obesity

Health care management

- Surgeries: herniorrhaphy
- Complications: incarceration (obstruction of intestinal flow), strangulation (obstruction of blood and intestinal flow)

ASSESSMENT

Signs and symptoms

Abdominal hernia

- Symptoms vary according to site of herniation
- Protruding bulge
- Pain
- Fecal urgency
- Abdominal distention
- Vomiting

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HERNIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss proper lifting methods — Encourage patient to maintain optimum weight

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.

- Contribute to plan of care update.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about diseases and disorders of the large intestines.

Description and etiology

Ulcerative colitis — Chronic inflammatory disease of the mucosa of the colon and rectum. Abscesses produce purulent drainage, leading to sloughing and ulceration of the mucosa. Patients go through periods of exacerbation and remission, with stress being a precipitating factor. Persons with ulcerative colitis are at an increased risk of developing colon or rectal cancer.

Causes

- Unknown

Health care management

- Stress relief
- High-calorie, high-protein diet; avoidance of milk products and very spicy foods
- Medications: sulfonamides, azathioprine, antibiotics, corticosteroids, antidiarrheal agents
- Surgeries: proctocolectomy, colectomy, colostomy, ileostomy

ASSESSMENT

Signs and symptoms

Ulcerative colitis

- Severe diarrhea
- Blood, pus, and mucus may be present in stool
- Rectal bleeding
- Abdominal cramps and distention
- Lethargy
- Weight loss

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ULCERATIVE COLITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide supportive care • Use emollients to prevent skin from excoriation • Help patient find alternatives to reduce stress • Avoid ice as it causes gas formation
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for electrolyte imbalance • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss diet therapy – Discuss stress relief – Teach patient to use medications

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Appendicitis** — Inflammation of the vermiform appendix. An obstruction occurs that prevents the contents of the appendix from emptying. The obstruction leads to inflammation, bacterial multiplication, infection, and pus formation. Pressure within the appendix may eventually lead to necrosis or perforation.
Causes	• Obstruction from bacteria or *fecalith* (hardened fecal mass)
Health care management	• Medications: antibiotics, analgesics • Surgeries: appendectomy • Complications: peritonitis

ASSESSMENT — **Signs and symptoms**

Appendicitis

- Pain in the lower right quadrant at McBurney's point (halfway between the umbilicus and right iliac crest)
- Nausea and vomiting
- Rebound tenderness and stiffness of the abdomen
- Patient may lay with knees flexed to prevent strain of abdominal muscles
- Elevated white blood cell count

ANALYSIS — Report findings to RN who will assimilate information for analysis and nursing care.

APPENDICITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Check lab results and report findings of elevated WBC to RN • Give supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Ileus — An obstruction of the intestines that prevents fecal material from passing through the bowel. Ileus may be caused by an obstruction or by inhibition of peristalsis (*paralytic ileus*).

Causes

- Gastric surgery
- Adhesions
- Neoplasms
- Incarcerated hernia
- Volvulus (twisting of the bowel)
- Intussusception (telescoping of the bowel)
- Impacted feces

Health care management

- Pain relief
- Nasogastric suctioning (cantor tube) to remove intestinal contents and relieve pressure
- Keep patient in Fowler's position to relieve pressure
- Correct fluid and electrolyte imbalance
- Medication: analgesics, metoclopramide
- Surgeries: resection and anastomosis, enterostomy, lysis of adhesions
- Complications: dehydration

ASSESSMENT

Ileus

Signs and symptoms

- Abdominal pain
- Fever
- Abdominal distention
- Diminished or absent bowel sounds
- Constipation
- Vomiting (fecal matter may be present)

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ILEUS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Administer medications • Administer replacement fluids • Assist with suctioning • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Diverticulitis** — Inflammation of the *diverticula* (herniated outpouches along the intestinal mucosa, usually in the sigmoid). The condition is most common in people over 50. **NOTE:** *Diverticulosis* (presence of diverticula) may be caused by inadequate dietary fiber, constipation, and congenital weakness of the muscular wall of the colon. Meckel's diverticulum are congenital and found in the ileum.
Causes	• Impaction of fecal material
Health care management	• Bed rest • Bland, high-residue diet • Medications: antibiotics, analgesics, stool softeners, bulk additives

- Surgeries: temporary colostomy
- Complications: perforation, hemorrhage

ASSESSMENT **Signs and symptoms**

Diverticulitis

- Constipation (may alternate with diarrhea)
- Gripping or cramping abdominal pain
- Fever and chills

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

DIVERTICULITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide bland, high-residue diet • Administer medications • Provide pre- and postoperative care • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Help patient prevent recurrence by following prescribed diet

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Cancer — Malignant neoplasms of the colon and rectum. Cancer of the colon and rectum is a leading type of cancer in the United States.

Risk factors

- Familial tendency
- Age over 40
- Ulcerative colitis
- History of colon polyps
- High-fat, low-fiber diet

Health care management

- Radiation therapy may be used to retard growth prior to surgery
- Chemotherapy may be used if metastasis has occurred
- Early detection (by means of an annual test to detect occult blood in the stool) is important, especially for those at high risk
- Surgeries: hemicolectomy, anterior rectosigmoid resection

ASSESSMENT

Signs and symptoms

Cancer

- Change in bowel habits
- Rectal bleeding
- Blood in stool (occult or gross)
- Abdominal pain
- Nausea and vomiting

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

COLON AND RECTAL CANCER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Give supportive care • Provide pre- and postoperative care • Administer medications
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Teach patient to care for colostomy if necessary

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 4 **Choose the correct word or phrase to complete statements about anorectal diseases and disorders.**

Description and etiology

Hemorrhoids — A mass of dilated, tortuous veins in the anorectum.

Causes

- Chronic constipation or diarrhea
- Portal hypertension
- Long periods of sitting
- Pressure during pregnancy

Health care management

- Diet therapy and stool softeners to reduce straining at stool
- Hot sitz baths
- Medications: topical analgesics and hydrocortisone creams
- Surgeries: Barron ligation, cryosurgery, hemorrhoidectomy

ASSESSMENT **Signs and symptoms**

Hemorrhoids

- Bleeding from rectum
- Pain, especially after bowel movements
- Pruritus
- Constipation
- External protrusion of tortuous veins around anus

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

HEMORRHOIDS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Give sitz baths • Apply ointments • Administer stool softeners • Provide diet high in fiber • Provide pre- and postoperative care • Encourage fluids
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss use of stool softeners and high fiber diet

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology	**Anal fistula** — An abnormal, infectious, tube-like passage from the anus to the skin surface or another body cavity.
Causes	• Anal abscess
Health care management	• Surgeries: fistulectomy
ASSESSMENT	**Signs and symptoms**
Anal fistula	• Discharge of pus near anus
	• Pain

Description and etiology	**Anal fissure** — An ulcer or laceration of the skin of the anal wall where the anus has been overstretched.
Causes	• Hard stool
	• Heavy lifting
Health care management	• Warm sitz baths
	• Medications: stool softeners, topical analgesics
	• Surgeries: sphincterotomy, fissurectomy
ASSESSMENT	**Signs and symptoms**
Anal fissure	• Pain on defecation
	• Bleeding from rectum
	• Constipation

Description and etiology	**Pilonidal cyst** — A cyst in the sacrococcygeal region. Pilonidal cysts may become infected and form fistulas.
Causes	• Poor hygiene
	• Obesity
	• Stiff hair that penetrates the skin

Health care management	• Surgeries: excision
ASSESSMENT	**Signs and symptoms**
Pilonidal cyst	• Swelling or pain in the sacrococcygeal area • Reddened, hard lesions that may drain purulent discharge
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

ANORECTAL LESIONS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Use warm sitz baths or compresses to provide relief • Administer medications • Change dressings as often as needed to promote healing • Provide stool softeners and high-bulk diet as needed • Provide pre- and postoperative care • Prevent pressure on area • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss proper hygiene — Discuss proper use of medications — Emphasize the need to use good body mechanics

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about diseases and disorders of the liver, pancreas, and gallbladder.

Description and etiology

Cirrhosis — A condition characterized by inflammation and formation of dense connective tissue in the liver, leading to degeneration of liver cells and fatty cell infiltration in the liver. The connective tissue becomes non-functioning liver tissue. There are three main types of cirrhosis – portal, biliary, and postnecrotic.

Causes

- Alcoholism, nutritional deficiency (portal cirrhosis)
- Hepatotoxins (postnecrotic)
- Bile duct obstruction (biliary)
- Congestive heart failure
- Infection

Health care management

- Treat causative factors
- Blood transfusions
- Prevent further liver damage
- Prevent infection and hemorrhage
- Correct malnutrition, fluid and electrolyte imbalance
- Medications: antihistamines, diuretics, sedatives (given with caution), vitamin K and other vitamin supplements
- Surgeries: portacaval shunt, LeVeen peritoneovenous shunt
- Complications: portal hypertension, ascites, ruptured esophageal varices, portal-systemic encephalopathy

ASSESSMENT

Signs and symptoms

Cirrhosis

- Nausea and vomiting
- Abdominal pain
- Anorexia
- Pruritus
- Weight loss (may be hidden by water retention)
- Fatigue

- Later stages: jaundice, ascites (fluid accumulation in peritoneal cavity), dyspepsia, esophageal varices, change in bowel habits, bleeding tendencies

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

CIRRHOSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Give supportive care • Monitor patient during blood transfusions • Give diet high in vitamins, moderate in carbohydrates and fats, low in sodium and protein • Administer medications • Use topical medications to alleviate itching • Assist with paracentesis (withdrawing fluid from abdominal cavity) if indicated for ascites • Provide pre- and postoperative care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Weigh patient daily • Observe for hemorrhage
• Plan for patient's discharge	• Prepare teaching plan – Stress the need to avoid alcohol, over-the-counter drugs, and environmental hazards that may cause further liver damage – Instruct the patient to follow prescribed diet, including any protein, sodium, and fluid restrictions – Encourage patient to get adequate rest and avoid injury and hemorrhage – Discuss proper use of medications – Discuss self-care measures to control itching and prevent skin damage – Discuss symptoms that should be reported to the physician (weight gain, increased abdominal girth, excessive bleeding, fever, change in mental state)

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Hepatitis — An inflammation of the liver from viral or toxic factors. There are four different types of viral hepatitis:

- Hepatitis A (HAV) is also called *infectious hepatitis*. Virus A is found in the gastrointestinal tract and is usually spread by fecal-oral contact. It may also be transmitted by contaminated food and water. A short-term prophylaxis is available for those at risk. The recovered patient generally becomes immune to subsequent HAV infection.
- Hepatitis B (HBV) is also called *serum hepatitis*. Virus B is found in the bloodstream, serous fluids, and other body fluids. HBV is usually transmitted by contaminated needles, sexual contact, and personal contact. It is rarely transmitted through blood transfusion because of routine screening. HBV is the most severe form of hepatitis with a mortality rate of 1 to 2%. The recovered patient is generally immune, but can become a chronic carrier of the virus and should never donate blood. A vaccine and an immune globulin are available. The Centers for Disease Control recommend that health care workers be vaccinated against HBV.
- Hepatitis non-A, non-B (NANBH) is also called *hepatitis C*. The virus is found in the bloodstream and transmitted through infected needles and blood transfusions. NANBH occurs in conjunction with HBV or as a superinfection in a HVB carrier. Repeated NANBH infections are possible.
- Delta hepatitis, also known as *hepatitis D*, can only occur in the presence of hepatitis B.

HVA and HVB are the most common types. Of the two, HVB is more severe and more often fatal. Diagnosis depends on evaluation of elements in blood samples. Toxic hepatitis, which is relatively uncommon, is the result of certain chemicals that act on the liver.

Causes

- Hepatitis virus (A, B, non-A non-B, or delta)
- Hepatotoxic chemicals (insecticides, cleaning solutions)

Health care management

- All cases of viral hepatitis must be reported to the Centers for Disease Control (CDC)
- Patients usually convalesce at home
- Supportive treatment
- Fluid and electrolyte replacements
- Encourage adequate rest and nutrition; alcohol should be avoided for at least one year
- Prevent spread of infection
- Medications: antiemetics, antihistamines
- Complications: fulminant viral hepatitis, subacute fatal viral hepatitis, confluent hepatic necrosis

ASSESSMENT

Signs and symptoms

Hepatitis

- Prodromal phase (patient may be asymptomatic)
  - Anorexia
  - Fever and chills
  - Nausea and vomiting
  - Dyspnea
  - Tenderness in right upper quadrant
  - Fatigue
  - Enlarged liver and lymph nodes
  - Pruritus
- Icteric phase
  - Jaundice
  - Dark urine and clay-colored stools
  - Increasing anorexia, nausea, and vomiting
  - Increasing dyspnea, malaise, and tenderness in right upper quadrant

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HEPATITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Encourage bed rest • Provide diet high in protein and carbohydrates • Administer fluids and electrolytes • Administer medications • Prevent spread of infection
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Observe urine and stool color • Observe for abnormal bleeding tendencies
• Plan for patient's discharge	• Prepare teaching plan – Give instructions for complete bed rest with no exertion – Discuss precautions to prevent the spread of infection – Warn patients that they cannot donate blood

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology	**Cholecystitis** — Inflammation of the gallbladder caused by an obstruction. Cholecystitis is more common in women, obese people, and people with diabetes mellitus.
Causes	• Cholelithiasis (gallstones) • Obstruction • Tumor

Health care management

- Medications: anticholinergics, antibiotics, antispasmodics, analgesics
- Surgeries: cholecystectomy, laparoscopy

ASSESSMENT

Signs and symptoms

Cholecystitis

- Nausea, vomiting
- Extreme pain in the right upper quadrant, referred to the right scapula
- Indigestion after fatty meals
- Flatulence
- Diarrhea
- Abdominal distention

Description and etiology

Cholelithiasis — Formation of gallstones. Stones are composed of precipitated bile salts, bile pigments, and cholesterol. Metabolic changes and biliary stasis cause chemical changes in the bile that form stones.

Risk factors

- Female
- Obesity
- Use of estrogens or oral contraceptives
- Pregnancy
- Hypothyroidism
- Hyperlipidemia

Health care management

- Same as cholecystitis

ASSESSMENT

Signs and symptoms

Cholelithiasis

- Same as cholecystitis
- Patients may be asymptomatic until a stone lodges in the biliary tract.

ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

CHOLECYSTITIS and CHOLELITHIASIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Keep patient NPO or provide diet without alcoholic beverages or fats • Administer medications • Provide pre- and postoperative care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Monitor drainage
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Pancreatitis — An acute or chronic inflammation of the pancreas.

Causes

- Acute
  - Alcoholism
  - Biliary tract disease
  - Trauma or surgery
  - Infection
  - Metabolic disorders
  - Connective tissue disorders
  - Drug toxicity
  - Intestinal diseases

- Chronic
  - Alcoholism
  - Cystic fibrosis
  - Trauma or surgery
  - Neoplasms
  - Malnutrition

Health care management

- Pain relief
- Treat underlying condition
- Provide supportive care
- Provide adequate nutrition; no caffeine or alcohol
- Maintain fluid and electrolyte balance
- Medications: antiemetics, antimicrobials, antacids, anticholinergics, meperidine, pancreatic enzyme replacements
- Surgeries: pancreatectomy, cholecystectomy, sphincteroplasty, sphincterotomy
- Complications: diabetes

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PANCREATITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide bland, nutritious meals that are low in fat and high in carbohydrates and protein • Administer medications • Assist with insertion of nasogastric tube • Keep patient NPO during acute phase • Give supportive care • Provide pre- and postoperative care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications

- Plan for patient's discharge	- Prepare teaching plan – Patient should avoid alcohol and caffeine – Make follow-up appointments with physician – Patients with chronic pancreatitis should be alert to signs of diabetes

---

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Cancer — Tumors form, resulting in an inability of organs to function normally.

Risk factors

- Gallbladder/biliary tract
  - History of cholelithiasis
- Liver
  - Hepatitis
  - Cirrhosis
  - Trauma
  - Exposure to hepatotoxins
- Pancreas
  - Male
  - Middle-aged or older

Health care management

- Palliative care
- Chemotherapy
- Radiation therapy
- Maintain nutritional status
- Medications: anticholinergics, analgesics
- Surgeries: resection, cholecystectomy, homotransplantation, excision

ASSESSMENT | **Signs and symptoms**

Cancer

- Gallbladder/biliary tract
  - Patients are often asymptomatic until late in disease
  - Jaundice
  - Weight loss
  - Pain
  - Mass in right upper quadrant
- Liver
  - Weight loss
  - Weakness
  - Jaundice
  - Anemia
  - Ascites
  - Pain in upper right quadrant
  - Fever
- Pancreas
  - Anorexia and weight loss
  - Pain
  - Jaundice
  - Nausea and vomiting
  - Peptic ulcer
  - Diarrhea

ANALYSIS | Report findings to RN who will assimilate information for analysis and nursing care.

CANCER of the LIVER, PANCREAS, and GALLBLADDER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide supportive care • Administer medications • Provide pre- and postoperative care
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan — Emphasize the need for proper nutrition — Teach proper use of medications

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the lower GI system.

Description and etiology

Celiac disease – A congenital malabsorption disorder characterized by gluten intolerance. Children are usually diagnosed between the ages of six months and two years, often because of a failure to thrive. Intake of gluten from foods such as wheat, rye, barley, and oats, which the child cannot tolerate, causes changes in the mucosa of the small bowel.

Causes

- Genetic factors

Health care management

- Gluten-free diet
- Symptomatic treatment
- Parent or caretaker teaching

ASSESSMENT

Signs and symptoms

Celiac disease

- Diarrhea
- Vomiting
- Weight loss
- Stools are pale, soft, and high in fat content
- Abdominal distention
- Anorexia
- Signs of malnutrition

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CELIAC DISEASE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide gluten-free diet • Provide supportive care • Give vitamin supplements • Maintain fluid and electrolyte balance
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Help parents and caregivers understand the need for a lifelong gluten-free diet – Help parents find support groups and special cookbooks

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Intussusception** – A telescoping of the intestines usually seen in infants from six months to two years old. Blood supply to the affected portion is cut off, leading to swelling, obstruction, and necrosis.
Causes	• Unknown
Health care management	• Hydrostatic pressure from a barium enema often results in reduction of the telescoped part • Decompression by nasogastric tube • Surgeries: surgical reduction, resection

ASSESSMENT **Signs and symptoms**

Intussusception

- Abdominal pain
- "Currant jelly" stools (reddish-brown, mucous present)
- Vomiting

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

INTUSSUSCEPTION

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Assist with barium enema • Provide supportive care • Maintain nasogastric tube • Provide pre- and postoperative care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • If reduction was accomplished by enema, observe closely for repeated onset of symptoms
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

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DIAGNOSTIC PROCEDURES

Barium enema – X-ray visualization of the lower GI system. A radiopaque enema is given before x-rays are taken.

Endoscopy – Visualization of the GI system using a fiberoptic scope. Common types of endoscopy are sigmoidoscopy (viewing the sigmoid) and colonoscopy (viewing the colon). Endoscopy is used to diagnose disorders and to assist in obtaining specimens for biopsy.

Cholecystography – X-ray visualization of the gallbladder. A radiopaque dye is ingested by the patient or injected intravenously, eventually being concentrated in the gallbladder before x-rays are taken.

Laboratory studies

- **Biopsy** – Tissue is extracted and examined.
- **Occult blood** – A chemical test to determine if blood is present in the feces.

Scanning – Visualization of an organ. A radioisotope is injected into the body and concentrates in an organ such as the liver or gallbladder. Radioactive emissions are recorded to visualize the organ.

Ultrasound – Sound waves are reflected off of organs such as the pancreas or liver to visualize the organ.

SURGICAL PROCEDURES

Anastomosis – Surgical joining of two tubular structures; used to connect remaining structures after resectioning or to correct a missing connection.

Anoplasty – Plastic surgery of the anus

Appendectomy – Surgical removal of the appendix

Barron ligation – A technique used to remove hemorrhoids. Rubber bands are applied to cut off circulation to the hemorrhoid, causing the tissue to become necrotic and slough off.

Cholecystectomy – Surgical removal of the gallbladder

Colectomy – Surgical removal of part or all of the colon

Colostomy – Formation of an opening from the colon to the abdominal wall. May be permanent or temporary, allowing part of the colon to rest and heal.

Cryosurgery – Using extreme cold to destroy tissues

Enterostomy – Formation of an opening from the intestine to the abdominal wall.

Excision – Surgically cutting away tissue

Fissurectomy – Excision of the tissue surrounding a fissure

Fistulectomy – Excision of the tissue surrounding a fistula

Hemicolectomy – Colectomy in which 50% or less of the colon is removed

Hemorrhoidectomy – Surgical removal of a hemorrhoid

Herniorrhaphy – Surgical repair of an abdominal hernia. Muscles may be sutured together or a synthetic mesh may be used to support the area.

Homotransplantation – Transplantation of a donated organ

LeVeen shunt – A system used to treat ascites. Fluid is shunted from the abdominal cavity into the superior vena cava.

Portacaval shunt – A surgery used to lower portal pressure by joining the portal vein and inferior vena cava, reducing bloodflow through the portal system.

Proctocolectomy – Removal of the rectum and lower end of the colon

Resection – Excision of part of an organ

Sphincteroplasty – Plastic surgery of a sphincter muscle

Sphincterotomy – Incision of a sphincter muscle

ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

VIII

Name ______________________________ Score __________

OBJECTIVE 7

Assist a patient with lower GI disorder to select appropriate foods.

INTRODUCTION

If you are in a clinical situation, your instructor will assign a patient to you and you will assist that patient with the selection of appropriate foods for a disorder of the lower GI.

If you are in a classroom situation, your instructor will provide a case study for you to complete the same assignment.

DIRECTIONS

Use your dietary\nutritional textbook to prepare a diet appropriate for the patient or case assigned to you.

List appropriate food choices and calorie counts for each. Assist patient in selecting a diet from among these foods.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records
- Write instructions

Operation and Calculation
- Calculate with whole numbers

Functional Math
- Solve practical problems

Patient ______________________________ Room _______

Doctor ______________________ Diagnosis _______________

____

____

Maximum calories per day _____________

MEAL FOOD CALORIES

Breakfast ____

____

____

Life Science
- Investigate health issues

Interactive Communications
- Communicate with clients/customers/patients

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

Snack ____________________

____

MEAL FOOD CALORIES

Lunch ____________________

____

____

____

Snack ____________________

____

____

____

Dinner ____________________

____

____

____

Snack ____________________

____

____

Comments or other considerations:

____

____

ASSIGNMENT SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

VIII

Name ______________________________ Score __________

OBJECTIVE 8

Plan care for the patient with disorders of the lower GI system.

INTRODUCTION

In this assignment you are given a case study of a hypothetical patient. Care plans are essentially research projects for each of your patients.

Wanda Redford is a 48-year-old secretary. She is suffering with chronic symptoms and was admitted today for diagnostic testing. Her admitting diagnosis is ulcerative colitis.

Supportive care and teaching will be essential elements of the nurse's responsibility during Mrs. Redford's hospitalization. Patients with colon disease suffer with chronic symptoms of unrelenting diarrhea, stools with blood and mucous, an inability to control defecation, weight loss, and isolation due to their diseases. Stressing the importance of taking medications and finding alternatives to reduce stress are additional nursing duties.

DIRECTIONS

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Mrs. Redford is your patient. Create a plan for her nursing care. Your instructor will provide a care plan form for your use. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care.

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT SHEET 3

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM VIII

Name ______________________________ Score __________

OBJECTIVE 9

Plan care for the patient experiencing colon surgery pre- and postoperative.

INTRODUCTION

Diagnostic testing for patients with diseases and disorders of the colon is painful and can be embarrassing. The nurse's responsibility will not only entail taking care of the physical needs, but the emotional needs.

Supportive care and teaching will be essential elements in the nurse's responsibility before surgery. Although the physician explains the procedure, patients are often nervous and cannot grasp the full extent of the discussion.

Ed Patterson is a 59-year-old who was admitted to the hospital with a diagnosis of colon cancer. He is scheduled for a colostomy.

DIRECTIONS

Mr. Patterson is your patient. Create a plan for his pre- and postoperative nursing care. Use additional medical-surgical resources to determine the procedure and supportive care appropriate for your patient. Your instructor will provide a care plan form for your use.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT SHEET 4

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

VIII

Name ______________________________ Score __________

OBJECTIVE 10

Plan care for the patient experiencing gallbladder or biliary surgery pre- and postoperative.

INTRODUCTION

In this assignment you are given a case study of a hypothetical patient. Patients who have been admitted for gallbladder surgery usually have not been suffering for years with their disease, but their symptoms are acute and intense.

Supportive care and teaching will be essential elements of the nurse's responsibility before surgery. Although the physician explains the procedure in detail, patients are often nervous and cannot grasp the full extent of the discussion.

Maggie Johnson is a 43-year-old whose admitting diagnosis is cholelithiasis. She is scheduled for a cholecystectomy.

DIRECTIONS

Mrs. Johnson is your patient. Create a plan for her pre-and postoperative nursing care. Use additional medical-surgical resources to determine the procedure and supportive care appropriate for your patient. Your instructor will provide a care plan form for your use.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT SHEET 5

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

VIII

Name ______________________________ Score __________

OBJECTIVE 11

Develop a teaching plan for a patient with a disorder of the lower GI system.

INTRODUCTION

Patients who have ulcerative colitis may appear to be outwardly hostile, but inwardly submissive. They may exhibit a helpless and hopeless attitude. These patients often have periods of isolation during exacerbation of their disease. When symptoms subside, they are in remission and can lead a more normal life. The threat of abdominal cramping and unrelenting diarrhea is always present. This disease can affect both sexes at any age.

Relieving the causative factors is sometimes difficult. Treatment consists of proper diet management, taking medication, and exploring alternatives to emotional stress.

The practical nurse has to be knowledgeable in dietary needs and must be able to support and give informed advice about diet and maintaining optimal weight.

In addition to nutrition management, the patient with ulcerative colitis must:

- Take vitamins for mineral replacement.
- Take sedatives and tranquilizers to help with rest and relaxation.
- Seek advise from a psychotherapist if necessary.
- Take antibiotics, analgesics and steroids to relieve symptoms.
- Drink plenty of water.
- Maintain bed rest during periods of exacerbation.
- Avoid antispasmodics, if possible, because they may cause perforation.

DIRECTIONS

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

Use a dietary handbook and the information about your patient from Assignment Sheet 2 to complete a teaching plan for a patient with ulcerative colitis.

1. What will you do to prepare the patient for the teaching session?

2. What materials, supplies, or equipment will you need?

3. Outline the teaching plan below.

   Preventive measures

   Dietary considerations

ASSIGNMENT SHEET 1

Check that foods listed in the diet are appropriate for the patient's needs.

ASSIGNMENT SHEETS 2-4

Care plans should meet the following criteria:

- Nursing process followed
- Problem stated appropriately
- Nursing actions/interventions include discharge planning

ASSIGNMENT SHEET 5

1. The nurse should consider the following factors:
   - Are there any distractions in the room?
   - Does the patient need glasses?
   - Does the patient feel uncomfortable or need to use the bathroom?
   - Is there sufficient lighting?
   - What is the patient's level of education?
2.
   - Dietary handbook
   - Books, pictures, and additional printed information about the disease
   - Pencil and paper for patient to make notes
3. Teaching plan should include the following:
   - Preventive measures:
     — Take vitamins for mineral replacement.
     — Take sedatives and tranquilizers to help with rest and relaxation.
     — Seek advise of a psychotherapist if necessary.
     — Take antibiotics, analgesics, and steroids to relieve symptoms.
     — Drink plenty of water.
     — Maintain bed rest during periods of exacerbation.

- Avoid antispasmodics, if possible, because they may cause perforation.

- Dietary considerations:

  - The patient should be on a bland diet with low fiber. The purpose of this diet is to reduce irritation to the colon.

  - Foods to avoid:

    Potato skins
    Crunchy peanut butter
    Nuts
    Dried peas and beans
    Green beans
    Prunes
    Berries
    Green peas
    Whole grain breads
    Cereals

  - Additional dietary considerations:

    Take medications according to directions
    Drink 6-8 glasses of water to aid in digestion
    Select young tender vegetables, which have less fiber than older vegetables
    Read ingredient labels when making your selections

JOB SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

VIII

Name ______________________________ Score __________

OBJECTIVE 12

Provide care for a patient with an ostomy.

INTRODUCTION

Patients with colostomies wear external appliances to collect feces and watery discharges from the colon. The time interval for changing the ostomy bag varies according to the odor of the contents and the lifestyle of the wearer. The bag should be emptied about four to six times a day, especially two to four hours after each meal. A bag can be worn for about one to five days before changing. Care of the skin around the stoma is an important consideration each time the bag is changed. Nurses have a responsibility to teach patients while doing ostomy care. The type and size of appliance varies with the stoma location, and patient preference. Patients may wear a one-piece or two-piece appliance. The procedure for ostomy care will vary according to the type of appliance used.

EQUIPMENT AND SUPPLIES

- Colostomy appliance, either with self-adhesive or belt attachment
- Skin prep
- Skin barrier
- Stoma measuring guide
- Plastic bag
- Soap and water
- Closure clamp
- Belt
- Bedpan
- Plastic rinse bottle filled with warm water
- Towels or pad protection
- Gloves

PROCEDURE

Functional Reading
- Interpret forms and records

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____

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Yes No

Planning

1. Reassure patient and explain procedure as you complete each step. _____ _____
2. Prepare for procedure. _____ _____

Implementation

1. Collect equipment. _____ _____
2. Explain procedure to the patient as you perform each step. _____ _____
3. Wash your hands. _____ _____
4. Place towel or protective pad across patient's abdominal area. _____ _____
5. Raise the patient's bed to a comfortable working height. _____ _____
6. Remove the clamp from the bottom of the old ostomy bag and empty the contents into the bedpan. _____ _____
7. Remove the appliance bag. _____ _____
8. Discard old appliance into the plastic bag. _____ _____
9. Clean the skin around the stoma with soap and water to remove feces. _____ _____
10. Leave a tissue over the stoma to absorb any spontaneous discharge. _____ _____
11. Measure stoma with measuring guide. _____ _____
12. Choose a pouch that fits tightly around the stoma. _____ _____
13. Make sure the new barrier and pouch do not cover the stoma; the hole should be 1/8" larger than the stoma. _____ _____
14. Trace the hole from the measuring guide onto the adhesive backed skin-barrier. _____ _____

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Functional Math
- Make measurements

Cognitive Activities
- Create a finished product

Job Acquisition/Development
- Master specific job task/procedure
- Practice good work habits/attitudes

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		Yes	No
15.	Cut the traced hole in the skin-barrier.	_____	_____
16.	Measure and cut the same size hole in the self-adhesive appliance.	_____	_____
17.	Peel off the paper backing on the skin barrier and put it on the skin around the stoma.	_____	_____
18.	Press gently to make sure it is secure.	_____	_____
19.	Peel off the paper backing on the adhesive-backed appliance and put it on the skin barrier.	_____	_____
20.	Press gently to make sure it is secure.	_____	_____
	NOTE: Curve of the clamp faces downward, toward the patient's body.		
21.	Press the air out of the bag and attach the clamp to the bottom of the bag.	_____	_____
22.	Attach the belt to the bag, if desired.	_____	_____
23.	Clean up:		
	a. Clean reusable equipment.	_____	_____
	b. Get rid of disposable equipment properly.	_____	_____
	c. Wash your hands.	_____	_____
	To empty bag:		
	a. Tilt the bag upward and remove the clamp.	_____	_____
	b. Rest the end of the bag on the edge of the bed pan.	_____	_____
	c. Allow the bag contents to drain out.	_____	_____

BEST COPY AVAILABLE

	Yes	No
d. Flush out the inside of the bag with the rinse bottle.	_____	_____
e. Put the clamp on the end of the bag.	_____	_____
f. Discard the contents of the bag.	_____	_____
g. Clean the equipment.	_____	_____
h. Wash your hands.	_____	_____
24. Document procedure according to agency requirements.	_____	_____

Evaluation

1. Recheck patient in 30 minutes for comfort.	_____	_____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

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Criteria:				
Used proper equipment correctly	4	3	2	1
Used universal precautions	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
1 **Unskilled** – Is familiar with process, but is unable to perform job

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JOB SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

VIII

Name ______________________________ Score __________

OBJECTIVE 13

Perform colostomy irrigation.

INTRODUCTION

Most ostomy patients wear an appliance because colon evacuation is irregular, and output unpredictable. Learning to irrigate an ostomy is difficult and sometimes unpleasant. Therefore, the nurse will need to proceed very slowly, and be clear when instructing the patient. The first irrigation can be attempted about five to seven days after surgery. This procedure is repeated daily. After about three to six weeks of daily irrigation, regular elimination should be established.

EQUIPMENT AND SUPPLIES

- Irrigating container
- Irrigating catheter
- Lubricant
- Prescribed solution
- Bed pan
- Plastic irrigating bag
- Irrigating sleeve or sheath
- Wash cloth and soap
- Plastic bag
- Bed protector
- Towel

PROCEDURE

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Assessment and analysis	Yes	No
1. Check physicians orders.	____	____
2. Identify patient.	____	____
3. Observe patient's condition; chart any changes.	____	____
Planning		
1. Reassure patient and explain procedure as you perform each step.	____	____
2. Prepare for procedure.	____	____

BEST COPY AVAILABLE

Functional Math
- Make measurements

Cognitive Activities
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

Implementation	Yes	No
1. Collect equipment.	____	____
2. Explain procedure to the patient as you perform each step.	____	____
3. Wash your hands.	____	____
4. Place a protective pad under patient's side, and under stoma area.	____	____
5. Remove old appliance.	____	____
6. Dispose in plastic bag.	____	____
7. Assist patient in turning slightly toward side of colostomy stoma.	____	____
8. Apply a drainage-irrigating sleeve to the cover the stoma.	____	____
9. Place the bed pan next to the patient to catch the irrigating solution.	____	____
10. Place the open end of the irrigating sleeve into the bed pan.	____	____
11. Hang the irrigating container 18 inches or less above the stoma.	____	____
12. Lubricate the tip of the irrigating catheter.	____	____
13. Run a small amount of solution through the tubing.	____	____
NOTE: This will remove the air from the tubing.		
14. Remove the clamp from the irrigating catheter.	____	____

BEST COPY AVAILABLE

WARNING: Colon puncture possible. Never force the catheter into the stoma.

	Yes	No
15. Insert the catheter into the stoma, about 4 to 6 inches.	_____	_____
16. Open the clamp and allow the solution to flow in slowly, pinching off the tubing as necessary to control the rate of flow.	_____	_____
17. Remove the catheter gently after the solution has been instilled.	_____	_____
NOTE: Solution may spurt out as the catheter is removed.	_____	_____
18. Allow time for the solution to return.	_____	_____
19. Remove the irrigating sleeve when the solution has stopped flowing from the stoma.	_____	_____
20. Cleanse the area surrounding the stoma with soap and water.	_____	_____
21. Apply medication around stoma as ordered to prevent excoriation.	_____	_____
22. Apply the ostomy appliance as prescribed.	_____	_____
23. Clean up:		
a. Clean reusable equipment.	_____	_____
b. Properly discard disposable equipment.	_____	_____
c. Wash your hands.	_____	_____
24. Document procedure according to agency requirements.	_____	_____

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	Yes	No
Evaluation		
1. Recheck patient in 30 minutes for comfort.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Used proper equipment correctly	4	3	2	1
Used universal precautions	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

BEST COPY AVAILABLE

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
1 **Unskilled** – Is familiar with process, but is unable to perform job

BEST COPY AVAILABLE

JOB SHEET 3

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

VIII

Name ______________________________ Score __________

OBJECTIVE 14

Perform gualac testing.

INTRODUCTION

Occult blood tests are done on feces to detect the presence of hidden blood in the stool. This test is used to detect disorders and diseases, such as colon cancer, which can be life threatening. Early detection can prevent major problems that may not be evident until serious symptoms develop.

EQUIPMENT AND SUPPLIES

- Guaiac test kit
- Guaiac developer
- Tongue or wooden applicator
- Gloves

PROCEDURE

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Functional Math
- Make measurements

Assessment and analysis	Yes	No
1. Check physicians orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient as you perform each step.	_____	_____
3. Wash your hands.	_____	_____
4. Put on gloves.	_____	_____

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Cognitive Activities
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
5. Collect a stool specimen.	_____	_____
6. Open the flap on the test kit.	_____	_____
7. Put a small amount of feces on the applicator.	_____	_____
8. Apply a thin layer of specimen to the guaiac-impregnated filter paper exposed in the box marked A.	_____	_____
9. Apply a thin layer of specimen to the box marked B.	_____	_____
10. Open the flap on the opposite side of the test kit.	_____	_____
11. Place 2 drops of developing solution on the filter paper.	_____	_____
12. Watch for color change. A blue stain will appear in about 30 seconds if the test is positive. No change will be evident if the test is negative.	_____	_____
13. Remove gloves.	_____	_____
14. Clean up:		
a. Clean reusable equipment.	_____	_____
b. Properly discard disposable equipment.	_____	_____
c. Wash your hands.	_____	_____
15. Document procedure according to agency requirements.	_____	_____

Evaluation

	Yes	No
1. Recheck patient in 30 minutes for comfort.	_____	_____

BEST COPY AVAILABLE

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used proper equipment correctly	4	3	2	1
Used universal precautions	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

BEST COPY AVAILABLE

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training
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2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
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WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

VIII

Name ______________________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the lower GI system to their correct definitions. Write the correct letters in the blanks.

_____ 1. Paralysis of the intestinal wall

_____ 2. Lack of muscle coordination

_____ 3. Spasmodic contraction of the anal sphincter with a constant desire to empty the bowel

_____ 4. Worm-like structure, such as the appendix

_____ 5. Pertaining to the intestines

_____ 6. Having a rank or foul odor

_____ 7. Distal part of the small intestines

_____ 8. Abnormal collection of fluid in the abdominal cavity

a. abscess

b. ascites

c. ataxia

d. diarrhea

e. enteric

f. fetid

g. funic

h. ileum

i. intergluteal

j. keratinous

k. paralytic ileus

l. purulent

m. tenesmus

n. vermiform

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OBJECTIVE 2

Choose the correct word or phrase to complete statements about diseases and disorders of the small intestines. Write the correct letters in the blanks.

_____ 1. Crohn's disease is a chronic inflammation of the GI tract affecting

a. all tissue layers
b. diverticula
c. mucosal layer
d. muscles

_____ 2. Patients with Crohn's disease should avoid foods that are

a. high calorie
b. high fat
c. very hot or cold
d. very spicy

_____ 3. Signs and symptoms of Crohn's disease include

a. "currant jelly" stools
b. fever
c. nausea and vomiting
d. pus or mucus in stool

_____ 4. Peritonitis may be caused by

a. an abdominal hernia
b. a genetic defect
c. perforated appendix
d. Crohn's disease

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Your patient is a 50-year-old who came to the hospital with severe abdominal pain. The emergency doctor examined her and admitted her with peritonitis.

Questions 5-7 apply to the above situation.

_____ 5. During the assessment phase you would note symptoms of ___.

a. weight loss and abdominal cramps
b. abdominal tenderness
c. pressure and protrusion of her abdomen
d. chronic diarrhea and blood in her stools

_____ 6. In your written plan, you will include ___.

a. administer iron supplements
b. provide stress-free environment
c. provide protein diet with vitamins
d. monitor and assess bowel sounds

_____ 7. In your implementation of the care plan, you will include ___.

a. bland diet
b. encourage ambulation
c. have patient turn, cough, and deep breathe
d. stool softeners

_____ 8. A hernia may be caused by

a. obesity
b. neoplasm
c. straining at stool
d. surgery

_____ 9. Complications of a hernia include

a. enteritis
b. incarceration
c. peritonitis
d. septicemia

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_____ 10. Careful attention to avoid jarring the patient when lifting is important when caring for a patient with _____.

a. peritonitis
b. regional enteritis
c. hernia
d. cancer

_____ 11. Antidiarrheal and antibiotics are prescribed for _____.

a. cancer
b. hernia
c. peritonitis
d. Crohn's disease

_____ 12. Signs and symptoms of a hernia include

a. diarrhea
b. hematemesis
c. protruding bulge
d. rectal bleeding

OBJECTIVE 3

Choose the correct word or phrase to complete statements about diseases and disorders of the large intestines. Write the correct letters in the blanks.

_____ 1. Ulcerative colitis is a chronic inflammatory disease of the

a. diverticula of the colon and rectum
b. mucosa of the colon and rectum
c. mucosa and muscular layers of the colon and rectum
d. muscular layers of the colon and ileum

_____ 2. Inflammation of herniated outpouches along the intestinal mucosa is known as

a. ileus
b. appendicitis
c. diverticulitis
d. ulcerative colitis

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_____ 3. A patient who has repeated episodes of ulcerative colitis has a higher risk of developing

a. diverticulitis
b. ileus
c. appendicitis
d. cancer

_____ 4. Patients with ulcerative colitis should eat a diet high in

a. calories
b. fats
c. dairy products
d. roughage

_____ 5. A patient with appendicitis may feel pain

a. between the umbilicus and left iliac crest
b. between the umbilicus and right iliac crest
c. over the umbilicus
d. referred to the scapula

_____ 6. Signs and symptoms of appendicitis include

a. blood and pus in stool
b. distended abdomen
c. nausea and vomiting
d. slowing or stopping of peristalsis

_____ 7. Ileus may be caused by

a. inflammation of the ileum
b. obstruction or inhibition of peristalsis
c. peritonitis
d. inflammation of the mucosa

_____ 8. Signs and symptoms of ileus include

a. abdominal distention
b. blood and pus in stool
c. diarrhea
d. hematemesis

May be photocopied for student use.

Your patient came to the doctor with a complaint of constipation and abdominal pain. The admitting x-rays reveal a diagnosis of diverticulitis.

Questions 9-12 apply to the above situation.

_____ 9. During the assessment phase, you will note symptoms of ___.

a. pain in the right lower quadrant of the abdomen, fever, vomiting
b. vomiting fecal material, dehydration, thirst
c. fever, gripping abdominal pain, constipation alternating with diarrhea
d. blood in the stool, nausea, vomiting

_____ 10. While writing the care plan, you will include ___.

a. bland diet with high residue
b. high protein, low fat diet
c. diet as tolerated
d. blenderized diet

_____ 11. During the implementation phase, you will plan to give the patient

a. laxatives
b. analgesics
c. sedatives
d. steroids

_____ 12. When preparing a teaching plan for the patient, you will plan to help him control his condition by

a. following a prescribed diet
b. avoiding foods high in fiber
c. taking stool softeners and laxatives daily
d. eating a high-calorie, high-protein diet

_____ 13. Risk factors for cancer of the colon and rectum include

a. Crohn's disease
b. high-fiber diet
c. high-fat, low-fiber diet
d. pilonidal cysts

May be photocopied for student use

_____ 14. Signs and symptoms of cancer of the colon and rectum include

a. change in bowel habits
b. diarrhea
c. pus in stool
d. steatorrhea

_____ 15. When implementing the plan to promote healing for a patient with appendicitis, you would

a. assist with decompression
b. administer medications
c. talk to the patient about reducing stress
d. provide a high-fiber diet

_____ 16. As part of the care plan for a patient with ulcerative colitis, you would include

a. talking to the patient about reducing stress
b. pre-postoperative care
c. assisting with decompression
d. applying ice compresses

OBJECTIVE 4

Choose the correct word or phrase to complete statements about anorectal diseases and disorders. Write the correct letters in the blanks.

_____ 1. A mass of distended, tortuous veins in the anorectum is a

a. pilonidal cyst
b. fistula
c. hemorrhoid
d. fissure

_____ 2. An ulcer in the skin of the anal wall is a ___.

a. pilonidal cyst
b. fistula
c. hemorrhoid
d. fissure

May be photocopied for student use.

_____ 3. Abscesses in the anal area can cause ___.

a. pilonidal cysts
b. fistulas
c. hemorrhoids
d. fissures

_____ 4. A stiff hair that penetrates the skin can cause

a. pilonidal cysts
b. fistulas
c. hemorrhoids
d. fissures

_____ 5. Chronic constipation and long periods of sitting can cause ___.

a. pilonidal cysts
b. fistulas
c. hemorrhoids
d. fissures

_____ 6. Signs and symptoms of hemorrhoids include

a. bleeding from rectum
b. discharge of pus near anus
c. discomfort in the gluteal cleft
d. signs of systemic infection

_____ 7. The teaching plan for patients with hemorrhoids should include

a. advise patient to avoid milk products
b. encourage patient to eat low-fiber diet
c. emphasize the need to use good body mechanics
d. discuss use of stool softeners

_____ 8. Signs and symptoms of anal fistulas include

a. bleeding from rectum
b. discharge of pus near anus
c. swelling or pain in the sacrococcygeal area
d. signs of systemic infection

May be photocopied for student use.

_____ 9. Signs and symptoms of anal fissures include

a. bleeding from rectum
b. discharge of pus near anus
c. swelling or pain in the sacrococcygeal area
d. signs of systemic infection

_____ 10. Signs and symptoms of pilonidal cysts include

a. bleeding from rectum
b. discharge of pus near anus
c. swelling or pain in the sacrococcygeal area
d. signs of systemic infection

_____ 11. The care plan for patients with anorectal lesions includes

a. apply ice packs to provide relief
b. provide low-bulk diet
c. provide stool softeners as needed
d. use pressure on area to stop bleeding

OBJECTIVE 5

Choose the correct word or phrase to complete statements about diseases and disorders of the liver, pancreas, and gallbladder. Write the correct letters in the blanks.

_____ 1. A formation of dense connective tissue with a destruction of liver cells is ___.

a. cholelithiasis
b. cirrhosis
c. hepatitis
d. pancreatitis

_____ 2. Inflammation of the gallbladder associated with stones in the bladder is ___.

a. cholecystitis
b. hepatitis
c. cholelithiasis
d. pancreatitis

_____ 3. Inflammation of the liver from viral or toxic factors is

a. cholecystitis
b. cirrhosis
c. hepatitis
d. pancreatitis

May be photocopied for student use.

_____ 4. Which of the following diseases is considered contagious?

a. cholecystitis
b. cirrhosis
c. hepatitis
d. pancreatitis

_____ 5. Chronic alcoholism, bile duct obstruction, and hepatotoxins can cause ___.

a. cholecystitis
b. cirrhosis
c. hepatitis
d. pancreatitis

Your patient, who was admitted to the hospital with cirrhosis of the liver, has a history of alcohol abuse and has recently noticed difficulty breathing.

Questions 6-9 apply to the above situation.

_____ 6. Your patient will have symptoms of ___.

a. anorexia, chills and fever, jaundice
b. rapid pulse, jaundice, constipation
c. headache, chills and fever, jaundice
d. abdominal pain, fatigue, jaundice

_____ 7. The patient's care plan will include ___.

a. diuretics and vitamins
b. antiemetics
c. antibiotics and analgesics
d. anticholinergics

_____ 8. The patient's diet will be

a. high carbohydrate, low fat
b. low protein, low calorie
c. low fat, high protein
d. moderate carbohydrate, low protein

May be photocopied for student use.

_____ 9. When you are implementing the care plan, you will watch for ___.

a. hemorrhage
b. intermittent fever
c. light skin
d. light stools

_____ 10. Hepatitis A is usually spread through

a. contaminated needles
b. fecal-oral contact
c. transfusions of blood or plasma
d. sexual contact

_____ 11. Hepatitis B is usually spread through

a. contaminated food and water
b. fecal-oral contact
c. transfusions of blood or plasma
d. contaminated needles and sexual contact

_____ 12. Delta hepatitis only occurs in the presence of

a. hepatitis A
b. hepatitis B
c. hepatitis C
d. non A, non B hepatitis

_____ 13. Patients with hepatitis should follow a diet that avoids

a. alcohol
b. high amounts of protein
c. high amounts of carbohydrates
d. excessive fluids

_____ 14. Signs and symptoms of the prodromal phase of hepatitis include

a. blood and pus in stools
b. enlarged liver and lymph nodes
c. jaundice
d. severe, cramping abdominal pains

May be photocopied for student use.

_____ 15. The nurse's teaching plan for patients with hepatitis should include

a. discussing stress relief
b. encouraging early ambulation
c. warning HBA patients that they are at a high risk of reinfection
d. warning patients that they cannot donate blood

_____ 16. Medications for a patient with cholecystitis include

a. antibiotics and anticholinergics
b. antibiotics and antiemetics
c. anticholinergics and antimicrobes
d. antispasmodics and antiemetics

_____ 17. Signs and symptoms of cholecystitis include

a. chills and fever
b. extreme pain in right upper quadrant and right scapula
c. extreme pain between the umbilicus and right iliac crest
d. blood and pus in stools

_____ 18. Risk factors for cholelithiasis include

a. obesity
b. male
c. use of anabolic steroids
d. hypolipidemia

_____ 19. Causes of acute pancreatitis include

a. alcoholism
b. cystic fibrosis
c. neoplasms
d. malnutrition

_____ 20. Patients with pancreatitis should avoid

a. carbohydrates and fats
b. caffeine and alcohol
c. foods high in protein
d. excessive fluids

May be photocopied for student use

_____ 21. Patients with pancreatitis are at an increased risk of developing

a. appendicitis
b. cancer
c. diabetes
d. peritonitis

_____ 22. Risk factors for cancer of the gallbladder and biliary tract include a history of

a. cholelithiasis
b. diabetes
c. pancreatitis
d. peritonitis

_____ 23. Medications for patients with cancer of the gallbladder and biliary tract include

a. antibiotics
b. anticholinergics
c. antimicrobes
d. antihistamines

OBJECTIVE 6

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the lower GI system. Write the correct letters in the blanks.

_____ 1. Children with celiac disease cannot tolerate

a. gluten
b. lactose
c. sugars
d. fats

_____ 2. Signs and symptoms of celiac disease include

a. constipation
b. "currant jelly" stools
c. signs of malnutrition
d. vomiting of fecal material

May be photocopied for student use.

_____ 3. The care plan for a patient with celiac disease includes

   a. help parents understand the need for a lifelong special diet
   b. prevent skin breakdown
   c. provide pre- and postoperative care
   d. teach parents to care for colostomy

_____ 4. Signs and symptoms of intussusception include

   a. constipation
   b. "currant jelly" stools
   c. stools are pale, soft, and high in fat content
   d. vomiting of fecal material

_____ 5. When implementing the plan to promote healing for a patient with intussusception, you would

   a. prevent skin breakdown
   b. provide gluten-free diet
   c. maintain nasogastric tube
   d. give vitamin supplements

NOTE: Objectives 7-14 are evaluated on Job Sheets/Assignment Sheets in this unit. If you have not completed these components, see your instructor.

May be photocopied for student use

WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

VIII

OBJECTIVE 1

1. k
2. c
3. m
4. n
5. e
6. f
7. h
8. b

OBJECTIVE 2

1. a
2. d
3. d
4. c
5. b
6. d
7. c
8. a
9. b
10. a
11. d
12. c

OBJECTIVE 3

1. b
2. c
3. d
4. a
5. b
6. c
7. b
8. a
9. c
10. a
11. b
12. a
13. c
14. a
15. b
16. a

OBJECTIVE 4

1. c
2. d
3. b
4. a
5. c
6. a
7. d
8. b
9. a
10. c
11. c

OBJECTIVE 5

1. b
2. a
3. c
4. c
5. b
6. d
7. a
8. d
9. a
10. b
11. b
12. b
13. a
14. b
15. d
16. a
17. b
18. a
19. a
20. b
21. c
22. a
23. b

OBJECTIVE 6

1. a
2. c
3. a
4. b
5. c

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

INTRODUCTION

The urinary system consists of the kidneys, ureters, bladder and urethra. The purpose of the kidneys is to filter waste products and excess water from the blood. The ureters transport these unwanted products to the bladder. The bladder holds the urine until it is excreted through the urethra. Urine formation regulates the body's balance of fluids and electrolytes. The kidneys have the unique ability to filter out waste products only and allow essential minerals to remain in the body. Because of advances in technology such as kidney transplants and dialysis, complete loss of kidney function may not be a life-threatening condition.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the urinary system and associated nursing processes. You will demonstrate these competencies by completing Assignment Sheets, Job Sheets, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the urinary system to their correct definitions.
2. Choose the correct word or phrase to complete statements about diseases and disorders of the urinary system.
3. Choose the correct word or phrase to complete statements about obstructive diseases and disorders of the urinary system.
4. Choose the correct word or phrase to complete statements about diseases and disorders of the prostate gland.
5. Choose the correct word or phrase to complete statements about traumatic injuries to the urinary system.

6. Choose the correct word or phrase to complete statements about renal failure and types of dialysis.

7. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the urinary system.

8. Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the urinary system.

9. Plan care for patients with transurethral resection prostatectomy. (Assignment Sheet)

10. Perform bladder irrigation/instillation. (Job Sheet 1)

11. Manage continuous bladder irrigation. (Job Sheet 2)

12. Manage a suprapubic catheter. (Job Sheet 3)

13. Strain urine for stones. (Job Sheet 4)

14. Apply a urostomy device. (Job Sheet 5)

15. Collect a urine specimen using a pediatric bag. (Job Sheet 6)

16. Perform a straight catheterization for residual urine. (Job Sheet 7)

SUGGESTED ACTIVITIES

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 – Objective 1, basic information that supports the rest of the unit;

  Part 2 – Objectives 2 and 3, the next two groupings, including obstructive and other disease and disorders of the urinary system;

  Part 3 – Objectives 4 and 5, the next two groupings, including diseases of the prostate gland and traumatic injuries to the urinary system; and

  Part 4 – Objectives 6-8, the next three groupings, including renal failure and dialysis, pediatric disorders, and teaching instructions for surgical patients.
- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a urologist, dialysis team member, nurse specialist, or speaker from a lithotripsy center to discuss diseases and disorders of the urinary system.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.
- Obtain models and large pictures of the urinary system.
- Make a poster of the urinary system.

- Make a bulletin board showing the urinary system.

- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration

  - Assist students to conduct a chapter service project on the urinary system.

  - Develop objectives for service project and identify a theme.

  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.

  - Plan a community or school health project that involves disseminating pamphlets about diseases and disorders of the urinary system.

  - Develop and/or participate in a community teaching project that involves diseases and disorders of the urinary system.

- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.

- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the urinary system to their correct definitions.

- Discuss terms associated with the urinary system.

- Have students play reinforcement games and work crossword puzzles using terms.

- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about diseases and disorders of the urinary system.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the urinary system.

- Have students share ideas that might be helpful in evaluating diseases and disorders of the urinary system.

- Discuss other diseases and disorders not mentioned in this unit.

- Review the structures of the vascular system.

- Stress that students will use the information in this section to complete Job Sheets 1-3.

Objective 3: Choose the correct word or phrase to complete statements about obstructive diseases and disorders of the urinary system.

- Have students share relevant incidents about friends or family members who have problems related to obstructive diseases and disorders of the urinary system.

- Have students share ideas that might be helpful in evaluating obstructive diseases and disorders of the urinary system.

- Discuss other diseases and disorders not mentioned in this unit.

- Stress that students can use the information in this unit to complete Job Sheets 4 and 5.

Objective 4: Choose the correct word or phrase to complete statements about diseases and disorders of the prostate gland.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the prostate gland.

- Have students share ideas that might be helpful in evaluating diseases and disorders of the prostate gland.

- Discuss other diseases and disorders not mentioned in this unit.

- Have students complete the Assignment Sheet.

Objective 5: Choose the correct word or phrase to complete statements about traumatic injuries to the urinary system.

- Have students share relevant incidents about friends or family members who have problems related to traumatic injuries to the urinary system.

- Have students share ideas that might be helpful in evaluating traumatic injuries to the urinary system.

- Discuss other diseases and disorders not mentioned in this unit.

Objective 6: Choose the correct word or phrase to complete statements about renal failure and types of dialysis.

- Have students share relevant incidents about friends or family members who have problems related to renal failure and types of dialysis.
- Have students share ideas that might be helpful in evaluating renal failure.
- Discuss other diseases and disorders not mentioned in this unit.
- Tour a dialysis unit.
- Invite a speaker to talk about dialysis.

Objective 7: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the urinary system.

- Have students share relevant incidents about friends or family members who have problems related to pediatric diseases and disorders of the urinary system.
- Have students share ideas that might be helpful in evaluating pediatric diseases and disorders of the urinary system.
- Discuss other diseases and disorders not mentioned in this unit.

Objective 8: Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the urinary system.

- Have students share ideas that would be helpful when caring for patients with diseases and disorders of the urinary system.
- Have students share ideas that would improve care of patients with diseases and disorders of the urinary system.

APPLICATION

- Make a video or skit about care of a person with problems associated with the urinary system. Either the students or the teachers can be the presenters.
- Students can practice care of the patient with problems associated with this unit.
- Have students present a two-minute speech on care of a patient with problems associated with the urinary system.

Objective 9: Plan care for patients with transurethral resection prostatectomy. (Assignment Sheet)

- Use the Assignment Sheet to give students an opportunity to practice ideas that will help when they care for a patient with transurethral resection prostatectomy.
- If clinical cases are available, allow students to apply this assignment sheet to their patients.
- Provide a care plan form for students' use.

Objective 10: Perform bladder irrigation/instillation. (Job Sheet 1)

- Use Job Sheet 1 to give students hands-on experience in performing bladder irrigation/instillation.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 11: Manage continuous bladder irrigation. (Job Sheet 2)

- Use Job Sheet 2 to give students hands-on experience in managing continuous bladder irrigation.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 12: Manage a suprapubic catheter. (Job Sheet 3)

- Use Job Sheet 3 to give students hands-on experience in managing urethral, ureteral, and suprapubic catheters.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 13: Strain urine for stones. (Job Sheet 4)

- Use Job Sheet 4 to give students hands-on experience in straining urine for stones.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 14: Apply a urostomy device. (Job Sheet 5)

- Use Job Sheet 5 to give students hands-on experience in applying a urostomy device.

- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 15: Collect a urine specimen using a pediatric bag. (Job Sheet 6)

- Use Job Sheet 6 to give students hands-on experience in collecting a urine specimen using a pediatric bag.

- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 16: Perform a straight catheterization for residual urine. (Job Sheet 7)

- Use Job Sheet 7 to give students hands-on experience in performing a straight catheterization for residual urine.

- Use a mannequin to practice and demonstrate procedures in the classroom.

EVALUATION

Pretest

- Give Written Test as pretest.

- Determine individual study requirements from pretest results.

- Counsel students individually on pretest results and study requirements.

- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.

- Evaluate students on Job Sheet activities.

- Complete appropriate section of Competency Profiles.

- Reteach and reevaluate if necessary.

- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

- Give Written Test.

NOTE: The Written Test may be given in sections if desired.

- Complete appropriate section of competency profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.
- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *University of California Berkeley Wellness Letter,* 48 Shattuck Square, Suite 43, Berkeley, CA. 94704-1140.

UNIT REFERENCES

- Betz, Cecily Lynn, and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing.* St. Louis: Mosby-Year Book, Inc., 1991.
- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.
- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.

- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.
- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.
- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C.V. Mosby Company, I990.

OBJECTIVE 1

Match terms associated with diseases and disorders of the urinary system to their correct definitions.

- **anuria** — No urinary output
- **azotemia** — The presence of urea in the blood
- **bladder** — A hollow organ that is a storage reservoir for urine
- **calyx (plural *calyces*)** — A division in the kidney pelvis that receives the urine
- **dysuria** — Pain or difficulty in urinating
- **enuresis** — Bedwetting
- **epididymis** — A body of tubular cells that rest on the testes and transport sperm
- **glomerulus** — A small round structure in the kidney body that filters blood and forms urine
- **hematuria** — Blood in the urine
- **nocturia** — Waking at night with the urge to urinate
- **oliguria** — Reduced urinary output
- **pyuria** — Presence of pus in the urine
- **renal pelvis** — The inner structure of the kidney that connects to the ureters
- **uremia** — Toxic levels of urea in the blood; caused by kidney malfunction
- **uremic frost** — White residue that may be deposited on the skin of a patient with uremia
- **ureters** — The tubes that connect the kidney to the bladder
- **urethra** — A tubal structure that is connected to the bladder; permits urine to pass from the bladder
- **vas deferens** — A muscular tube that transports sperm from the testes to the urethra

OBJECTIVE 2	**Choose the correct word or phrase to complete statements about diseases and disorders of the urinary system.**
Description and etiology	**Urethritis** — A urinary tract infection (UTI) of the urethra. It affects women more often than men, and can occur with sexually transmitted diseases, such as gonorrhea.
Causes	• Infectious organisms
Health care management	• Encourage increased fluid intake • Warm sitz baths • Patients should use clean technique for perineal care • Medications: antibiotics, urinary antiseptics, analgesics
ASSESSMENT	**Signs and symptoms**
Urethritis	• Dysuria with burning sensation when urinating • Voiding small amounts • Frequency • Urgency • Cloudy urine • Vaginal discharge and irritation • Discomfort of suprapubic area
Description and etiology	**Cystitis** — UTI of the bladder from an infection that begins in the urethra. It affects women more often than men because of the close proximity to the vagina and rectum, and is often called "honeymoon disease."
Causes	• Infectious organisms
Health care management	• Same as urethritis • Infection tends to recur; prophylactic treatment may be needed
ASSESSMENT	**Signs and symptoms**
Cystitis	• Same as urethritis

Description and etiology

Epididymitis — Inflammation of the epididymis from an infectious organism that often follows a prostate or urinary tract infection or gonorrhea. The infection enters the urethra and progresses along the vas deferens to the epididymis. Infection may be unilateral or bilateral. Epididymitis tends to recur – recurrent infections, especially when bilateral, may cause sterility.

Causes

- Infectious organism
- Trauma

Health care management

- Bed rest
- Support or elevation of scrotum
- Ice compresses
- Medications: antibiotics, analgesics

ASSESSMENT

Signs and symptoms

Epididymitis

- Pain in scrotal area
- Edema
- Chills and fever
- Pyuria
- Nausea and vomiting in severe cases

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

URINARY TRACT INFECTIONS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Encourage fluid intake • Provide warm sitz baths or ice compresses • Maintain bed rest • Obtain urine specimen • Provide peri care if patient has catheter
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan – Emphasize adequate fluid intake and good perineal hygiene – Sexual partners may also be infected – Stress the importance of prompt treatment of infections

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Acute pyelonephritis** — A UTI of the kidney tissues. Pyelonephritis usually occurs with pregnancy, chronic health problems such as diabetes mellitus or kidney diseases, obstruction, trauma, or infection.
Causes	• Infectious organism (usually *E. coli*)
Health care management	• Bed rest • Maintain hydration

- Medications: antibiotics, analgesics

ASSESSMENT

Acute pyelonephritis

Signs and symptoms

- Chills and fever
- Flank pain
- Tenderness in the costovertebral area
- Malaise
- Nausea

Description and etiology

Chronic pyelonephritis — Repeated bacterial infections of the kidney tissue and pelvis that can damage the kidneys beyond treatment or repair.

Causes

- Same as acute pyelonephritis

Health care management

- Same as acute pyelonephritis
- Complications: chronic renal failure

ASSESSMENT

Chronic pyelonephritis

Signs and symptoms

- Malaise
- Nausea
- Low-grade fever

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PYELONEPHRITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Encourage fluid intake unless contraindicated • Maintain bed rest • Obtain urine specimen • Provide peri care if patient has catheter
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Stress the need to continue taking medication even if symptoms subside – Stress the importance of prompt treatment of infections

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Acute glomerulonephritis — A group of kidney diseases that involves an inflammatory antigen-antibody reaction in the glomeruli. Acute glomerulonephritis is usually preceded by a streptococcal infection. Other precipitating factors include systemic lupus erythematosus, diabetes mellitus, and vascular injury. Recovery time may be up to two years, and the disease may become chronic.

Causes

- Immune response

Health care management

- Symptomatic relief
- Bed rest

- Protein and sodium may be restricted
- Medications: antibiotics

ASSESSMENT

Acute glomerulonenephritis

Signs and symptoms

- Facial edema
- Headache
- Fever
- Malaise
- Dyspnea on exertion
- Blood in urine
- Nausea and vomiting
- Raised blood pressure

Description and etiology

Chronic glomerulonephritis — A recurrent type of antigen-antibody reaction that damages the glomeruli. Repeated attacks from infectious organisms cause scarring and permanent damage to the kidneys, eventually leading to renal failure.

Causes

- Same as acute glomerulonephritis

Health care management

- Same as acute glomerulonephritis

ASSESSMENT

Chronic glomerulonephritis

Signs and symptoms

- Fatigue
- Dyspnea
- Morning headaches
- Edema
- Nausea and vomiting
- Blurred vision

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

GLOMERULONEPHRITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Maintain bed rest • Obtain urine specimen • Provide peri care if patient has catheter
• Continually monitor patient's condition	• Monitor vital signs (especially blood pressure), I/O • Weigh patient daily
• Plan for patient's discharge	• Prepare teaching plan – Discuss need for rest, medication, proper diet – Emphasize avoiding infection

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Nephrotic syndrome — A group of symptoms resulting from damage to the glomeruli. Nephrotic syndrome can occur in adults and children.

Causes

- Glomerulonephritis
- Autoimmune diseases
- Systemic diseases
- Allergic reactions
- Infections

Health care management

- Monitor and maintain fluid balance
- Prevent skin breakdown

	• Provide high-protein, low-sodium diet • Bed rest for severe edema; encourage movement in bed to prevent complications • Medications: corticosteroids, diuretics, antihypertensives, antineoplastic drugs
ASSESSMENT	**Signs and symptoms**
Nephrotic syndrome	• Severe edema • Fatigue • Anorexia • Oliguria
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

NEPHROTIC SYNDROME

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide high-protein, low-sodium diet • Balance rest and activity • Provide peri care if patient has catheter • Provide skin care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Measure abdominal girth • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Emphasize need for appropriate diet – Discuss signs that require a doctor's attention (edema, fatigue, infection, headache)

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Polycystic kidney disease — Hereditary disease characterized by grapelike clusters of cysts throughout the kidney structures, leading to enlargement of the kidneys and progressive renal failure.

Causes

- Genetic factors

Health care and etiology

- The purpose of treatment is to delay renal failure and provide symptomatic relief
- Dialysis
- Prevent infection and bleeding
- Genetic counseling is recommended
- Medications: antibiotics, analgesics, antihypertensive agents, diuretics
- Surgeries: transplant

ASSESSMENT

Polycystic kidney disease

Signs and symptoms

- Hematuria
- Hypertension
- Enlarged, palpable kidneys
- Abdominal and flank pain
- Headache

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

POLYCYSTIC KIDNEY DISEASE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Apply heat for pain relief unless bleeding occurs • Encourage bed rest when bleeding occurs
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Explain the nature of this incurable hereditary disease – Discuss the need for appropriate fluid intake and rest – Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
OBJECTIVE 3	**Choose the correct word or phrase to complete statements about obstructive diseases and disorders of the urinary system.**
Description and etiology	**Urethral stricture** — Constriction or narrowing of the urethra. This condition is more common in men because of the length of the urethra.
Causes	• Congenital defects • Infection • Trauma • Pressure from tumor

Health care management

- Maintain hydration
- Medications: analgesics
- Surgeries: dilation, internal urethrotomy, urethroplasty with temporary urinary diversion

ASSESSMENT

Signs and symptoms

Urethral stricture

- Dysuria
- Urine stream may be weak; may seem to spray or "fork"
- Nocturia
- Pain

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

URETHRAL STRICTURE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Encourage fluid intake • Provide pre- and postoperative care as needed • Provide peri care if patient has catheter • Administer medications
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan — Teach catheter care if needed at home — Emphasize the need for increased fluids

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Urolithiasis (calculi) — Stones formed by crystallization of minerals. Stones that are too large to pass through the kidney can obstruct urine flow, causing backflow, chronic infections, and gradual destruction of the kidney. If stones are small, they can be excreted.

Causes

- Prolonged immobility
- Gout
- Hyperparathyroidism
- Recurrent UTIs
- Excessive intake of calcium, alkalies, vitamin D
- Prolonged steroid use

Health care management

- Strain urine to detect passed stone
- Encourage increased fluid intake
- Provide pain relief
- Transcutaneous shock wave lithotripsy may be used to disintegrate stones so they may be passed through the urinary tract
- Medications: narcotics, antibiotics, analgesics, antispasmodics, chemolytic agents
- Surgeries: pyelolithotomy, nephrolithotomy, ureterolithotomy, lithotripsy

ASSESSMENT

Urolithiasis

Signs and symptoms

- Renal colic (severe, stabbing pain)
- Nausea and vomiting
- Symptoms of UTI

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

UROLITHIASIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Encourage fluid intake • Provide pre- and postoperative care as needed • Collect and strain all urine • Provide peri care if patient has catheter
• Continually monitor patient's condition	• Monitor vital signs, I/O • Watch for signs of infection
• Plan for patient's discharge	• Prepare teaching plan – Discuss dietary factors involved in calculi formation – Encourage adequate fluid intake to prevent urinary stasis – Teach patient to strain urine at home

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Hydronephrosis — Dilation of the kidney pelvis and calyces of one or both kidneys because of an obstruction of urine flow. If the blockage is in the urethra or the bladder, back pressure affects both kidneys; if limited to one ureter from a kidney stone or kink, then only one kidney is damaged.

Causes

- Urinary tract obstruction

Health care management

- Treatment of underlying condition
- Medications: antibiotics, narcotics, antispasmodics
- Surgeries: nephrectomy

ASSESSMENT

Signs and symptoms

Hydronephrosis

- Gradual blockage causes dull flank pain
- Sudden blockage causes sudden, severe stabbing pain
- Nausea and vomiting
- Dysuria
- Nocturia
- Palpable distended bladder

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HYDRONEPHROSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Follow prescribed fluid intake • Provide pre- and postoperative care as needed • Strain all urine • Provide peri care if patient has catheter • Administer medications
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss symptoms of future obstructions – Emphasize the need to follow prescribed fluid intake – Teach perineal hygiene methods if needed

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes.
	• Assess vital signs again, report any changes.
	• Contribute to plan of care update.
Description and etiology	**Benign tumors** — Benign tumors may occur throughout the urinary system, but are most commonly found in the bladder. Small adenomas of the kidneys may not cause major damage. Papillomas of the bladder tend to develop into malignant tumors and should be removed.
Causes	• Unknown
Health care management	• Surgeries: transurethral fulguration, excision
ASSESSMENT	**Signs and symptoms**
Benign tumors	• Painless hematuria (often intermittent)
	• Cystitis
Description and etiology	**Malignant tumors** — Most renal tumors are malignant, affecting the kidney tissue and bladder. They are rarely seen before the age of 40, and often occur in men between the ages of 50-70. The most common site is the bladder.
Causes	• Exposure to certain chemicals
	• Tobacco use
	• Genetic factors
	• Renal disease
Health care management	• Treatment depends on the extent of tumor growth
	• Chemotherapy is palliative only; radiation therapy may be used to slow growth before surgery or to reduce pain
	• Surgeries: transurethral fulguration, excision, segmental bladder resection, cystectomy with urinary diversion, nephrectomy

ASSESSMENT | **Signs and symptoms**

Malignant tumors

- Painless hematuria (often intermittent)
- Cystitis
- Weight loss
- Flank pain
- Palpable flank mass
- Signs of urinary obstruction
- Renal failure

ANALYSIS | Report findings to RN who will assimilate information for analysis and nursing care.

BENIGN and MALIGNANT TUMORS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide peri care if patient has catheter • Encourage fluid intake
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Emphasize the need for follow-up care to patients with papillomas – Teach patient to care for urinary diversion

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 4 **Choose the correct word or phrase to complete statements about diseases and disorders of the prostate gland.**

Description and etiology

Prostatitis — Inflammation of the prostate gland. The condition may be acute or chronic; the acute condition may become chronic.

Causes

- Urethral strictures
- Infectious organisms carried from the urethra to the prostate
- Gonorrhea

Health care management

- Treat underlying condition, if any
- Infection control
- Warm sitz baths for pain relief
- Avoid alcohol, caffeine, very spicy foods
- Acute patients should avoid arousal and intercourse
- Bed rest
- Medications: antibiotics, analgesics, stool softeners
- Complications: abscesses, septicemia

ASSESSMENT **Signs and symptoms**

Prostatitis

- Fever and chills
- Low back and perineal pain
- Urgency
- Frequency
- Dysuria
- Nocturia

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

PROSTATITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide warm sitz baths • Encourage bed rest • Encourage acute patients to abstain from intercourse
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss dietary restrictions – Emphasize the importance of follow-up care

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Benign prostatic hypertrophy (BPH) — The prostate enlarges and extends toward the bladder. Because the enlarged prostate causes an obstruction, the bladder and ureters slowly dilate, and urine stagnates in the bladder. The urinary stream decreases, and voiding becomes difficult or sometimes impossible. Incidence increases with age, affecting men over 50 years old.

Causes

- Unknown

Health care management

- Relieve urinary retention by catheter insertion
- Continuous irrigation of catheter
- Medications: antibiotics, analgesics, antispasmodics

	• Surgeries: transurethral prostatic resection (TURP), suprapubic prostatectomy, retropubic prostatectomy, perineal prostatectomy
ASSESSMENT	**Signs and symptoms**
Benign prostatic hypertrophy	• Nocturia • Frequency • Dysuria • Palpable enlarged prostate • Urinary tract infection
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

BENIGN PROSTATIC HYPERTROPHY

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Provide peri care if patient has catheter • Maintain patency of catheter • Encourage increased fluid intake • Prevent contamination of surgical site
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications

• Plan for patient's discharge	• Prepare teaching plan – Patients may experience urinary incontinence; discuss perineal exercises – Assure patients that sexual functioning should not be affected unless a radical perineal prostatectomy is performed – Patients should avoid vigorous exercise, heavy lifting, intercourse, or driving for three weeks after surgery – Encourage increased fluid intake – Emphasize the need to prevent contamination of surgical site

---

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Prostate cancer — One of the most commonly found cancers in men, prostate cancer usually affects men over 50 years old. Tumors are usually asymptomatic until advanced stages; therefore, regular rectal examinations and prostate-specific antigen tests are important for men ages 40 and over.

Causes

- Unknown (familial tendency)

Health care management

- Radiation therapy
- Surgeries: radical perineal resection, prostatectomy
- Complications: incontinence, impotence

ASSESSMENT

Prostate cancer

Signs and symptoms

- Frequency
- Urgency
- Nocturia
- Hematuria
- Weak, slow urine stream

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

PROSTATE CANCER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide peri care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Teach perineal exercises to regain bladder control – Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 5 **Choose the correct word or phrase to complete statements about traumatic injuries to the urinary system.**

Description and etiology **Kidney trauma** — Back injuries, abdominal injuries, flank injuries, or rib fractures can result in injury to the kidneys. Injuries include contusions, lacerations, and rupture. The kidneys receive half of the blood flow from the abdominal aorta; therefore, massive bleeding can occur.

Causes

- Motor vehicle accidents
- Falls

	• Athletic injuries
	• Stab or gunshot wounds
Health care management	• Stabilize patient
	• Prevent infection, hemorrhage, and shock
	• Promote urinary tract drainage
	• Medications: analgesics, antibiotics
	• Surgeries: nephropexy, nephrostomy, nephrectomy
	• Complications: shock, infection, hemorrhage
ASSESSMENT	**Signs and symptoms**
Kidney trauma	• Hematuria or bleeding from urinary meatus
	• Pain and tenderness of the flank and upper abdomen
	• Nausea and vomiting
	• Rigid abdomen

Description and etiology	**Ureteral trauma** — Tearing or lacerations can result from pelvic fractures.
Causes	• Same as kidney trauma
Health care management	• Stabilize patient
	• Prevent infection, hemorrhage, and shock
	• Promote urinary tract drainage
	• Medications: analgesics, antibiotics
	• Surgeries: cystotomy, ureterostomy
ASSESSMENT	**Signs and symptoms**
Ureteral trauma	• Anuria
	• Hematuria
	• Dysuria

	• Signs of peritonitis

Description and etiology	**Bladder trauma** — Pelvic fractures, abrasions, or a forceful blow to the abdomen when the bladder is full can result in contusion, perforation, or rupture.
Causes	• Same as kidney trauma
Health care management	• Stabilize patient • Prevent infection, hemorrhage, and shock • Promote urinary tract drainage • Medications: analgesics, antibiotics • Surgeries: cystotomy, suturing of bladder, cystectomy with ureterostomy
ASSESSMENT	**Signs and symptoms**
Bladder trauma	• Same as ureteral trauma • Swelling or discoloration of penis, scrotum, and perineum

Description and etiology	**Urethral trauma** — Tearing or lacerations can result from pelvic fractures.
Causes	• Same as kidney trauma
Health care management	• Same as bladder trauma • Surgeries: reconstruction
ASSESSMENT	**Signs and symptoms**
Urethral trauma	• Hematuria • Dysuria • Anuria
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

TRAUMATIC INJURIES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Administer medications
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Monitor drainage tubes
• Plan for patient's discharge	• Prepare teaching plan – Teach ostomy care

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about renal failure and types of dialysis.

Description and etiology

Acute renal failure — A decline in renal function. The kidneys are unable to excrete body wastes, resulting in accumulation of waste products and uncontrolled fluid and electrolyte balances. Acute renal failure usually results from trauma that causes ischemic or toxic damage. The patient will be extremely ill and prognosis ranges from good to poor, depending on the underlying condition.

Causes

- Trauma
- Toxic substances
- Blood or fluid loss

- Cardiac problems (including pulmonary edema and congestive heart failure) or cardiac surgery
- Sepsis shock

Health care management

- Treatment of underlying condition
- Establish and maintain fluid and electrolyte balance
- Peritoneal dialysis or hemodialysis
- BUN analysis
- Prevent complications
- Medications: potassium-binding agents, cation exchange resins, glucose IV, insulin, sodium bicarbonate
- Surgeries: transplant

ASSESSMENT

Acute renal failure

Signs and symptoms

- Oliguria
- GI bleeding
- Lethargy and drowsiness
- Confusion
- Nausea and vomiting
- Edema
- Coma
- Hypertension
- Cardiac arrhythmias

Description and etiology

Chronic renal failure — A progressive, irreversible decline in renal function. Without dialysis or a kidney transplant, the patient will die from uremia.

Causes

- Kidney disease
- Repeated infections or obstructions

- Hypertension
- Metabolic diseases
- Toxic substances

Health care management

- Symptomatic treatment
- Provide skin care
- Establish and maintain fluid and electrolyte balance
- Manage hypertension
- Provide proper diet
- Peritoneal dialysis or hemodialysis
- BUN analysis
- Prevent complications
- Medications: potassium-binding agents, cation exchange resins, glucose IV, insulin, sodium bicarbonate, antihypertensives, antiemetics, antihistamines

ASSESSMENT

Chronic renal failure

Signs and symptoms

- Anemia
- Anorexia
- Nausea and vomiting
- Oliguria
- Uremic frost
- Hyperpigmentation
- Shortness of breath
- Constipation
- Diarrhea
- Pruritus
- Personality changes
- Hypertension

- Glucose intolerance
- Muscle twitching or numbness

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

RENAL FAILURE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Encourage patient to turn, cough, deep breathe • Administer medications • Provide diet high in calories, low in protein, sodium, and potassium • Provide emotional support to patient and family • Give good skin care • Provide pre- and postoperative care as needed • Use aseptic technique when caring for catheter insertion site
• Continually monitor patient's condition	• Monitor vital signs, I/O • Weigh patient before and after treatment • Observe for complications or adverse reactions
• Plan for patient's discharge	• Prepare teaching plan – Instruct patient on realities of dialysis – Instruct patient and family as to home care – Recommend supportive agencies

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Dialysis — Treatment used to remove waste products from the body when the kidneys are not functioning effectively or when the patient is in renal failure. Dialysis takes over the work of damaged kidneys.

- **Hemodialysis** — Removal of body wastes in the blood. Blood is circulated through an arterial-venous shunt (usually in the arm or groin) through a semipermeable membrane and returned to the body.
- **Peritoneal dialysis** — Removal of body wastes using the patient's peritoneal membrane as a semipermeable membrane. A catheter is inserted into the peritoneal cavity. An isotonic solution is instilled through the catheter, remains in the peritoneal cavity for a specified length of time, and is drained.
- **Continuous ambulatory peritoneal dialysis (CAPD)** — Method of dialysis that allows patients to perform the treatment at home without being confined to a bed. This method involves continuous peritoneal contact with a dialysis solution, which is instilled and withdrawn through a permanent catheter in the peritoneal cavity. The exchange of fluid is performed by the patient 4-5 times per day.

OBJECTIVE 7

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the urinary system.

Description and etiology

Exstrophy of the bladder – A congenital defect in which the anterior surface of the bladder is exposed on the lower abdomen. Other defects are often present, including genital anomalies.

Causes

- Failure of the abdominal wall and ventral wall of the bladder to fuse in utero

Health care management

- Prevent skin excoriation from constant contact with urine
- Prevent infection
- Prevent trauma to bladder
- Surgeries: plastic surgery, ileal conduit

ASSESSMENT

Signs and symptoms

Exstrophy of the bladder

- Exposed urinary tract

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

EXSTROPHY OF THE BLADDER

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions
Check medication record	
Collect equipment	
Promote healing	Cover area with gauze and petroleum jelly Keep area clean and dry Use ointment to protect surrounding skin Provide pre- and postoperative care Keep infant positioned on back or side Provide emotional support to parents
Continually monitor patient's condition	Monitor vital signs, I/O Observe for complications
Plan for patient's discharge	Prepare teaching plan – Teach parents to care for infant before and after surgery – Recommend support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	Re-assess patient, report any changes. Assess vital signs again, report any changes. Contribute to plan of care update.

Description and etiology	**Urethral misalignments** – Congenital malposition of the urethra. In patients with *hypospadias*, the urethral opening is on the lower surface of the penis or in the vagina. *Epispadias* refers to a urethral opening on the dorsal surface of the penis.
Causes	Unknown
Health care management	Surgeries: plastic surgery
ASSESSMENT	**Signs and symptoms**
Urethral misalignments	Misplacement of urethral opening

Description and etiology	**Phimosis** – Congenital stenosis or constriction of the foreskin that prevents it from being pushed back to its normal position.
Causes	• Unknown
Health care management	• Surgeries: circumcision
ASSESSMENT	**Signs and symptoms**
Phimosis	• Narrow, retracted foreskin • Edema

URETHRAL MISALIGNMENTS and PHIMOSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Keep area clean and dry • Provide emotional support for parents and child • Emphasize to older children that they did not do anything "wrong" or "bad" to cause condition
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Teach parents to care for child before surgery can be performed

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology

Wilm's tumor – A malignant tumor of the kidney. Children are usually diagnosed around the age of three, although tumor growth may begin in utero.

Causes

- Genetic factors

Health care management

- Palpation increases the risk of metastasis; once the tumor is diagnosed, the child's abdomen should not be palpated
- Radiation therapy and chemotherapy
- Surgeries: tumorectomy, nephrectomy

ASSESSMENT

Signs and symptoms

Wilm's tumor

- Palpable mass in either side of upper abdominal quadrant
- Abdominal pain
- Nausea and vomiting
- Anorexia
- Weight loss
- Constipation

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

WILM'S TUMOR

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions
Check medication record	
Collect equipment	
Promote healing	Provide pre- and postoperative care Provide supportive care for patient receiving radiation or chemotherapy Avoid manipulating abdomen; warn parents and caregivers against palpating abdomen Provide emotional support for parents
Continually monitor patient's condition	Monitor vital signs, I/O Observe for complications
Plan for patient's discharge	Prepare teaching plan – Emphasize the importance of follow-up care in preserving the remaining kidney

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 8

Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the urinary system.

Before surgery

- Reinforce the physician's explanation of the procedure with an explanation or drawing.
- Encourage the patient to express feelings of fear and anxiety.
- Explain and obtain a completed informed consent prior to the procedure.

- Enhance the patient's understanding of the preoperative preparations ordered by the physician. These can involve administering antibiotics, pain medications, or IV solutions.

- Give reassurance while administering skin preparations that may be needed if an abdominal or perineal approach is anticipated.

- Explain that vital signs will be taken frequently before and after the surgical procedure.

After surgery

- Explain that a strict record of urinary intake and output will be kept.

- Increase the patient's understanding of optimal nutritional and fluid status.

- Teach the patient to splint the incisional area while turning, coughing, and breathing deeply.

- Teach the patient to recognize symptoms that should be reported to the nurse or physician.

- Explain that dressings will be changed as ordered. Expect large amounts of serosanguineous drainage.

- Explain that a sterile technique will be used when handling catheters.

- Reinforce that prescribed medications will be given pre- and postoperatively as ordered.

- Explain that laboratory values will be evaluated, and any abnormalities will be reported.

DIAGNOSTIC PROCEDURES

Computerized axial tomography (CAT scan) – Radiographic study that uses a computer-controlled scanner to produce three-dimensional images of an organ not usually visualized by x-rays.

Cystoscopy – An invasive procedure involving use of a scope to visualize and examine the inside of hollow organs. The scope is inserted into the bladder through the urethra.

Kidney-ureter-bladder radiography (KUB) – Radiographic visualization of the urinary tract structures.

Laboratory studies

- **Blood urea nitrogen (BUN)** – A measure of the amount of urea in the blood; used to determine kidney function.
- **Concentration and dilution** – A measure of the specific gravity of a urine sample; used to determine kidney function.
- **Creatinine** – Blood or a 24-hour urine specimen are tested for the level of creatinine
- **Culture and sensitivity** – Urine is collected and infectious organisms are allowed to grow; used to detect presence of infectious organisms
- **Serum albumin** – A measure of the amount of albumin in the blood
- **Urinalysis** – An analysis of urine, including color, clarity, and specific gravity
- **Urine chemistry** – Analysis of the amount of electrolytes (sodium, potassium, and calcium) in the urine

Magnetic resonance imaging (MRI) – Visualization of body tissues using deflection of magnetic energy.

Renal angiography – Radiographic visualization of the blood vessels supplying the kidneys. Radiopaque dye is injected into the veins.

Retrograde pyelography – Radiographic study of the urinary tract. Radiologic dye is injected into the ureters to study the upper urinary tract; a cystoscope is used to visualize the lower urinary tract.

Ultrasonography – Visualization of body structures using reflected sound waves.

SURGICAL PROCEDURES

Circumcision – Removal of the foreskin of the penis

Cutaneous ureterostomy — Surgical transplant of the ureter to the skin surface

Cystostomy — Surgical incision into the bladder

Cystotomy (cystectomy) — Removal of the bladder

Ileal conduit — Surgical transplant of the ureters to a section of terminal loop or to a loop of the colon that is brought out through the abdominal wall

Internal urethrotomy – Surgical release of a urethral stricture

Nephrectomy — Removal of a kidney

Nephrolithotomy — Surgical incision into the parenchyma of the kidney to remove a stone

Nephropexy – Suturing a displaced kidney into place

Nephrostomy – Surgically creating a fistula into the renal pelvis

Nephrotomy — Surgical incision into the kidney

Percutaneous lithotripsy – Removal of a urinary stone through an incision over the kidney

Perineal prostatectomy – Removal of the prostate gland by an incision between the scrotum and rectum

Pyelolithotomy — Surgical incision into the renal pelvis to remove a stone

Resection – Excision of part of an organ

Retropubic prostatectomy – Removal of the prostate gland by an abdominal incision below the bladder

Suprapubic prostatectomy – Removal of the prostate gland by an abdominal incision into the bladder

Transurethral fulguration – Destruction of tissue by electrical current; the instrument is inserted through the urethra

Transurethral resection prostatectomy (TURP) – Closed surgery; removal of tissue from an enlarged prostate through the urethra

Ureterolithotomy – Surgical incision into a ureter to remove a stone

Ureterosigmoidostomy — Surgical transplant of the ureters to the sigmoid colon; patients void and defecate through the rectum.

Ureterostomy — Surgical opening into the ureter

Urethroplasty – Reconstruction of a ureter

ASSIGNMENT SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

Name ______________________________ Score __________

OBJECTIVE 9

Plan care for patients with transurethral resection prostatectomy.

INTRODUCTION

A transurethral resection prostatectomy (TURP) is the surgical removal of prostatic tissue. The surgical risks are minimal, and hospital stay is short. The advantages of this procedure are that an abdominal incision is avoided and the patient experiences relatively little pain. A surgeon performs the procedure. An instrument with a light and cutting tool is inserted directly into the urethra to the prostate. The gland is viewed while the cutting tool cuts away tiny pieces of the prostate gland. After the procedure, the nurse should observe for hemorrhage, symptoms of urethral stricture, and difficulty urinating.

The practical nurse must be knowledgeable, supportive, and able to give informed advice about the disease and complications. Reinforcing these aspects at every opportunity is an important part of the nurse's responsibility.

Ernest Palombo is 75 years old. He has been diagnosed with benign prostatic hypertrophy and admitted to the hospital for a TURP.

DIRECTIONS

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization

Functional Writing
- Complete forms and records

Use the above scenario or a patient in your clinical practice to plan care for a patient. Care plans are essentially research projects for each of your patients. Use medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Use the information in Objective 4 to help with patient care. Your instructor will provide a care plan form.

Nursing interventions include:

- Monitor vital signs as ordered
- Record accurate intake and output
- Administer prescribed medications
- Provide appropriate nutrition and fluids
- Encourage physical activity as tolerated
- Provide and assess emotional status
- Assist with personal care
- Monitor and inspect catheter equipment

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

- Observe for complications
- Provide pre- and postoperative care

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

ASSIGNMENT SHEET

Care plan should meet the following criteria:

- Nursing process followed
  - Assessment
  - Analysis (under direction of RN)
  - Planning
  - Implementation
  - Outcome/evaluation (under direction of RN)

- Problem stated appropriately

- Nursing actions/interventions include discharge planning

JOB SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

Name ________________________________ Score ________

OBJECTIVE 10

Perform bladder irrigation/instillation.

INTRODUCTION

Bladder irrigation helps to keep the catheter tubing patent. Washing out the tubing with a sterile solution removes any bladder sediment or clots that may form from trauma or surgery. The solution also soothes and promotes healing. A strict sterile technique must be used when doing this procedure.

EQUIPMENT AND SUPPLIES

- Sterile irrigation kit OR
- 2 50 cc syringes
- Sterile irrigating solution (usually sterile normal saline)
- Sterile gloves
- Antiseptic wipes

PROCEDURE

Functional Reading
- Interpret forms and records

Functional Writing
- Complete forms and records

Operation and Calculation
- Calculate with whole numbers

Functional Math
- Make measurements

Interactive Communications
- Communicate with clients/customers/patients

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient.	_____	_____
3. Wash your hands.	_____	_____
4. Open the sterile pack.	_____	_____

BEST COPY AVAILABLE

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
5. Put on the sterile gloves.	_____	_____
6. Wipe the portal of the catheter with the antiseptic wipe.	_____	_____
7. Clamp the catheter.	_____	_____
8. Separate the catheter from the drainage tubing and cover the drainage tubing tip with a sterile cap.	_____	_____
9. Insert the syringe into the catheter.	_____	_____
10. Instill the solution.	_____	_____
11. Remove the syringe.	_____	_____
12. For instillation, clamp the catheter for the designated time.	_____	_____
13. Reconnect the drainage tube to the catheter and allow the solution to drain.	_____	_____
14. Subtract the amount of solution used from the total output at the end of the shift.	_____	_____
15. Clean up:		
a. Put all reusable equipment in the proper place for resterilization.	_____	_____
b. Discard disposable equipment according to universal precautions.	_____	_____
c. Wash your hands.	_____	_____
16. Document procedure according to agency requirements.	_____	_____

Evaluation

	Yes	No
1. Recheck patient in 30 minutes for comfort.	_____	_____

BEST COPY AVAILABLE

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Used universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

BEST COPY AVAILABLE

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
1 **Unskilled** – Is familiar with process, but is unable to perform job

BEST COPY AVAILABLE

JOB SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

Name ______________________________ Score ________

OBJECTIVE 11 **Manage continuous bladder irrigation.**

INTRODUCTION

Clots form after bladder or prostate surgery. Continuous irrigation prevents complications because obstructions are immediately flushed out, and blockage is prevented. The physician begins the procedure when the catheter is inserted into the bladder after surgery, and the solution is allowed to run through the tubing while being monitored. The inflow bag hangs above the patient, tubing extends from the bag, and is connected to a catheter that is inserted into the patient's bladder. A second tube extends from the catheter to a drainage bag that is hung below the patient.

EQUIPMENT AND SUPPLIES

- One bag of sterile irrigating solution
- Pen
- Work sheet

PROCEDURE

Functional Reading
- Interpret forms and records

Functional Writing
- Complete forms and records

Operation and Calculation
- Calculate with whole numbers

Functional Math
- Make measurements

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient.	_____	_____
3. Wash your hands.	_____	_____

BEST COPY AVAILABLE

Interactive Communications
- Communicate with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
4. Make sure a replacement bag of irrigating solution is available.	_____	_____
5. Check the flow lines for kinks.	_____	_____
6. Make sure the solution is flowing through the tubing.	_____	_____
7. Check the flow rate to make sure it is accurate.	_____	_____
8. Measure the outflow volume to make sure it is correct.	_____	_____

⚠ **WARNING:** Bladder rupture possible. Excessive fluid in the bladder can cause rupture. The outflow volume should be slightly more than the inflow volume because of urinary output. If the inflow is greater, report this immediately to the RN.

	Yes	No
9. Measure the inflow volume to make sure the flow rate is correct.	_____	_____
10. Assess the outflow volume for appearance.	_____	_____
11. Report any abnormalities to the RN.	_____	_____
12. Clean up:		
a. Put all reusable equipment in the proper place for resterilization.	_____	_____
b. Discard disposable equipment according to universal precautions.	_____	_____
c. Wash your hands.	_____	_____
13. Document procedure according to agency requirements.	_____	_____
Evaluation		
1. Recheck patient in 30 minutes for comfort.	_____	_____

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(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Used universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

BEST COPY AVAILABLE

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training
3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
1 **Unskilled** – Is familiar with process, but is unable to perform job

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JOB
SHEET 3

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

Name ______________________________ Score ________

OBJECTIVE 12

Manage a suprapubic catheter.

INTRODUCTION

A catheter is used to bypass an obstruction, empty the bladder, obtain a sterile urine specimen, and calculate residual urine in the bladder after voiding. Urethral catheters are inserted into the urethral meatus, ureteral and suprapubic catheters are inserted into the patient through an incision in the skin. Catheter care requires a daily inspection of the equipment and place of entry. Cleaning and inspecting for patency and irritation is the nurse's responsibility. During the patient's morning bath and at bedtime, catheters should be cleaned and checked to prevent infection, which is a common complication. Patients who are going home with a catheter can learn to provide their own catheter care.

EQUIPMENT AND SUPPLIES

- Povidone-iodine solution or other antiseptic solution
- 4 X 4 dressing
- Gloves
- Soap and water
- Washcloth
- Towel
- Basin

PROCEDURE

Functional Reading
- Interpret forms and records

Functional Writing
- Complete forms and records

Operation and Calculation
- Calculate with whole numbers

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure.	_____	_____
2. Prepare for procedure.	_____	_____

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Functional Math
- Make measurements

Interactive Communications
- Communicate with clients/customers/patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/Development
- Master specific job task/procedure
- Practice good work habits/attitudes

Implementation	Yes	No
1. Collect equipment.		
2. Explain procedure to the patient.		
3. Wash your hands.		
4. Pour the water into the basin.		
5. Put on gloves.		
6. Place the towel near the area to be cleaned.		
7. Moisten the washcloth.		
8. Put soap on the washcloth.		
9. Gently clean and rinse the area where the catheter enters the patient's body.		

⚠ **CAUTION:** Injury possible. Pulling on the catheter can damage internal tissue. Do not pull on the catheter.

10. Inspect the catheter tubing for kinks or blockage.		
11. Inspect the area where the catheter enters the patient's body, including the tissue around the port of entry.		
13. Remove gloves.		
14. Clean up:		
a. Put all reusable equipment in the proper place for resterilization.		
b. Properly discard disposable equipment.		
c. Wash your hands.		
15. Document procedure according to agency requirements.		

BEST COPY AVAILABLE

Evaluation	Yes	No
1. Recheck patient in 30 minutes for comfort.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Used universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

BEST COPY AVAILABLE

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** — Can perform job with no additional training

3 **Moderately Skilled** — Has performed job during training program; limited additional training may be required

2 **Limited Skill** — Has performed job during training program; additional training is required to develop skill

1 **Unskilled** — Is familiar with process, but is unable to perform job

BEST COPY AVAILABLE

JOB SHEET 4

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

Name ______________________________ Score ________

OBJECTIVE 13

Strain urine for stones.

INTRODUCTION

Calculi can form anywhere in the urinary tract. They may easily be excreted if they are small, or may become lodged in the urinary tract. The urine is strained to collect the stones for analysis. Urine that has been strained cannot be used for a culture.

EQUIPMENT AND SUPPLIES

- Strainer
- Specimen bottle with label
- Graduated container
- Urinal or bedpan
- Gloves

PROCEDURE

Functional Reading
- Interpret forms and records

Functional Writing
- Complete forms and records

Operation and Calculation
- Calculate with whole numbers

Functional Math
- Make measurements

Interactive Communications
- Give/follow oral directions
- Communicate with clients/customers/patients

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition, chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient and stress the importance of collecting all urine.	_____	_____

BEST COPY AVAILABLE

Cognitive Activities

- Collect/record information
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
3. Wash your hands.	_____	_____
4. Place the bedpan or urinal in the bathroom.	_____	_____
a. Tell female patients to put the bedpan or "hat" over the toilet and void *through the strainer* into the bedpan or "hat."	_____	_____
b. Tell male patients to void *through the strainer* into the urinal.	_____	_____
5. Tell the patient to notify the nurse after each voiding.	_____	_____
6. Empty the urine into the container.	_____	_____
7. Inspect the urine in the container.	_____	_____
8. Inspect the strainer.	_____	_____
9. Empty any residue from the strainer into the specimen bottle.	_____	_____
10. Rinse the bedpan or urinal with water.	_____	_____
11. Discard the urine in the graduated container and rinse with water.	_____	_____
12. Put a label on the specimen bottle, and take it to the laboratory.	_____	_____
13. Clean up:		
a. Put all reusable equipment in the proper place for resterilization.	_____	_____
b. Properly discard disposable equipment.	_____	_____
14. Document procedure according to agency requirements.	_____	_____

Evaluation

1. Recheck patient in 30 minutes for comfort.	_____	_____

BEST COPY AVAILABLE

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

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PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Used universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

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AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

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JOB SHEET 5

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

Name ______________________________ Score ________

OBJECTIVE 14

Apply a urostomy device.

INTRODUCTION

When a patient has a cystectomy, it becomes necessary to wear a urinary collecting appliance. Since the bladder is surgically removed, the ureters are diverted to an opening in the skin. The urine drains from the kidney to the opening, called a stoma. The nurse needs to be knowledgeable and empathetic when teaching patients and their families to care for the stoma and appliance.

EQUIPMENT AND SUPPLIES

- Wash basin
- Soap and water
- Washcloth
- Towel
- Measuring guide
- Urinary appliance
- Graduated container
- Ostomy adhesive
- Skin barrier
- Gloves
- Gauze pads

PROCEDURE

Functional Reading
- Interpret forms and records

Functional Writing
- Complete forms and records

Operation and Calculation
- Calculate with whole numbers

Functional Math
- Make measurements

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure.	_____	_____
2. Prepare for procedure.	_____	_____

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Interactive Communications
- Communicate with clients/customers/patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

Implementation

	Yes	No
1. Collect equipment.	____	____
2. Explain procedure to the patient.	____	____
3. Wash your hands.	____	____
4. Place the towel across the patient's abdominal area.	____	____
5. Raise the patient's bed to a comfortable working height.	____	____
6. Put on gloves.	____	____
7. Open the drain valve from the appliance bag and empty the urine into the graduated container.	____	____
8. Gently remove the appliance bag using soap and water.	____	____
9. Discard the old appliance.	____	____
NOTE: To prevent the urine from seeping out of the stoma onto the skin, insert a piece of rolled gauze into the stoma.		
10. Clean the skin around the stoma with soap and water to remove any residue.	____	____
11. Carefully dry the entire area around the stoma with a piece of gauze.	____	____
12. Apply a layer of ostomy adhesive around the stoma.	____	____
13. Wait until the adhesive has dried thoroughly.	____	____
14. Measure the stoma with the measuring guide.	____	____
NOTE: Make sure the new barrier and appliance do not cover the stoma; the opening should be 3/4" larger than the stoma.		

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	Yes	No
15. Trace the opening from the measuring guide onto the skin barrier.	_____	_____
16. Cut an opening into the skin barrier to fit the size of the stoma.	_____	_____
17. Measure and cut the same size hole in the appliance.	_____	_____
18. Apply the skin-barrier around the stoma.	_____	_____
19. Remove the gauze from inside the stoma.	_____	_____
20. Apply the appliance around the stoma.	_____	_____
21. Press gently to make sure it is secure.	_____	_____
22. Attach the end of the urinary appliance to the drainage tube.	_____	_____
23. Take off gloves.	_____	_____
24. Clean up:		
a. Put all reusable equipment in the proper place for resterilization.	_____	_____
b. Properly discard disposable equipment.	_____	_____
c. Wash your hands.	_____	_____
25. Document procedure according to agency requirements.	_____	_____

Evaluation

1. Recheck patient in 30 minutes for comfort.	_____	_____

BEST COPY AVAILABLE

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Used universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

BEST COPY AVAILABLE

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

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BEST COPY AVAILABLE

JOB SHEET 6

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

Name ______________________________ Score ________

OBJECTIVE 15

Collect a urine specimen using a pediatric bag.

INTRODUCTION

Small children cannot provide a clean urine specimen because they have no bladder control. A special collection device is used to provide a urine specimen for laboratory analysis. The collection bag has adhesive flaps which are applied directly to the skin.

EQUIPMENT AND SUPPLIES

- Urine collection bag
- Specimen container with label
- Two disposable diapers
- Scissors
- Washcloth
- Soap and water
- Towel
- Basin
- Gloves

PROCEDURE

Functional Reading
- Interpret forms and records

Functional Writing
- Complete forms and records

Operation and Calculation
- Calculate with whole numbers

Functional Math
- Make measurements

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition, chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient.	_____	_____
3. Wash your hands.	_____	_____

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Interactive Communications
- Communicate with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
4. Put on gloves.	_____	_____
5. Moisten the washcloth.	_____	_____
6. Apply soap to the cloth.	_____	_____
7. Thoroughly clean the perineal area.	_____	_____
8. Rinse off the soap with clear warm water.	_____	_____
9. Thoroughly dry the area with the towel.	_____	_____
10. Bend the child's legs and spread them apart.	_____	_____
11. Remove the covering of the collection bag to expose the adhesive.	_____	_____
12. Gently press the bag to the perineum.	_____	_____

NOTE: For male patients, apply the bag over the penis and scrotum; for female patients, begin at the bottom rim of the bag, apply the bag while moving upward, leaving the labia majora outside the bag.

13. Cut a slit in the diaper.	_____	_____
14. Put the diaper on the child, and gently pull the bag through the slit.	_____	_____
15. When the urine is visible in the bag, empty the urine into the specimen container.	_____	_____
16. Properly label the container and take it to the laboratory or to the proper place for delivery to the laboratory.	_____	_____
17. Put a clean diaper on the child.	_____	_____

BEST COPY AVAILABLE

	Yes	No
18. Clean up:		
a. Put all reusable equipment in the proper place for resterilization.	_____	_____
b. Properly discard disposable equipment.	_____	_____
c. Wash your hands.	_____	_____
19. Document procedure according to agency requirements.	_____	_____

Evaluation

1. Recheck patient in 30 minutes for comfort.	_____	_____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1

BEST COPY AVAILABLE

Used universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

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JOB
SHEET 7

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

Name ______________________________ Score ________

OBJECTIVE 16

Perform a straight catheterization for residual urine.

INTRODUCTION

The purpose for catheterization for residual urine is to determine the amount of urine that remains in the bladder after the patient has voided and to determine the patient's ability to completely empty the bladder. If the bladder is not completely emptied, patients can develop infections or calculi can form. Urinary tract infections are the leading nosocomial hospital infections. A sterile technique is essential to help avoid infection.

EQUIPMENT AND SUPPLIES

- Water and soap
- Washcloth
- Towel
- Flashlight (if more light is needed and a helper is available to hold the flashlight)
- Exam gloves
- Sterile gloves
- Drapes
- Catheterization kit
- If no catheterization kit is available, the following supplies are needed
    - Povidone-iodine solution or other antiseptic solution
    - Catheter
    - Cotton balls
    - Lubricant
    - Sterile specimen cup
    - Forceps
    - Basin or graduate

PROCEDURE

Functional Reading
- Interpret forms and records

Functional Writing
- Complete forms and records

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____

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Operation and Calculation
- Calculate with whole numbers

Functional Math
- Make measurements

Interactive Communications
- Communicate with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

Planning

1. Reassure patient and explain procedure. _____ _____
2. Prepare for procedure. _____ _____

Implementation _____ _____

1. Collect equipment. _____ _____
2. Explain procedure to the patient. _____ _____
3. Have the patient void. _____ _____
4. Wash your hands. _____ _____
5. Raise the bed to a comfortable working height. _____ _____
6. Place the patient in position. _____ _____

   NOTE: For male patients, use the dorsal position. For female patients, use the dorsal recumbent position.

7. Put on the exam gloves. _____ _____
8. Moisten the washcloth and apply soap. _____ _____
9. Thoroughly wash the perineal area. _____ _____
10. Use clear water to rinse the area. _____ _____
11. Use the towel to dry the area. _____ _____
12. Take off the exam gloves. _____ _____
13. Place the drape over the patient. _____ _____
14. Direct the helper to hold the flashlight to maximize visualization, if necessary. _____ _____
15. Open the catheterization kit. _____ _____

    NOTE: Use sterile technique.

16. Put on the sterile gloves. _____ _____
17. Open the anti-infective solution and lubricant. _____ _____

BEST COPY AVAILABLE

	Yes	No
18. Dip the end of the catheter into the lubricant.		
19. Place the catheter on the sterile working surface.		
20. Pour the antiseptic solution on the cotton balls.		
21. Using the forceps to hold the cotton balls, thoroughly clean the genitalia with the antiseptic solution.		
For female patients:		
a. With your non-dominant hand, separate the labia to expose the urinary meatus.		
NOTE: This hand is now contaminated. Do not move your hand from the patient's labia until the catheter is in place.		
b. Wipe one far outer edge of the meatus, top to bottom, using one stroke of a cotton ball. Discard the cotton ball and repeat for the other side of the meatus.		
c. Repeat Step 19 b for each side of the urinary meatus.		
d. Repeat Step 19 b directly over the center of the patient's meatus.		
For male patients:		
a. Retract the patient's foreskin with your non-dominant hand, if necessary.		
NOTE: This hand is now contaminated. Do not move your hand from the patient's foreskin until the catheter is in place.		

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Yes No

b. Wipe in a circular motion around the urinary meatus and discard the cotton ball. _____ _____

c. Repeat with a fresh cotton ball, making a larger circle outside of the previously cleaned circle. Continue until the entire glans is cleaned. _____ _____

22. Grasp the catheter 3" from the tip. Position the draining end of the catheter in the basin or specimen cup. _____ _____

NOTE: Because of numerous skin folds and the close proximity of the vagina, the urinary meatus can be difficult to detect. If the end of the catheter touches a structure other than the urinary meatus, it is contaminated and must be replaced with a sterile catheter.

23. Gently insert the catheter into the urinary meatus. _____ _____

24. Reassure the patient and ask if there is any unusual discomfort. _____ _____

25. Wait until all the urine has stopped flowing, then gently pinch off and remove the catheter. _____ _____

NOTE: If more than 1000 ml drains from the patient's bladder, clamp the catheter and allow the patient to rest according to institutional policy before continuing.

26. Pour the urine from the basin into the specimen bottle. _____ _____

27. Apply the label: take the specimen to the laboratory. Note on the label that the specimen was obtained by catheterization. _____ _____

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	Yes	No
28. Clean up:		
a. Put all reusable equipment in the proper place for resterilization.	____	____
b. Properly discard disposable equipment.	____	____
c. Wash your hands.	____	____
29. Document procedure according to agency requirements.	____	____

Evaluation

1. Recheck patient in 30 minutes for comfort.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Used universal precautions	4	3	2	1

BEST COPY AVAILABLE

Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS ______________________________

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

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BEST COPY AVAILABLE

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

Name ______________________ Score __________

OBJECTIVE 1

Match terms associated with diseases and disorders of the urinary system to their correct definitions. Write the correct letter in the blank.

Part 1

_____ 1. A hollow organ that is a storage reservoir for urine

_____ 2. No urinary output

_____ 3. A muscular tube that transports sperm from the testes to the urethra

_____ 4. A body of tubular cells that rest on the testes and transport sperm

_____ 5. Pain or difficulty in urinating

_____ 6. A tubal structure that is connected to the bladder; permits urine to pass from the bladder

_____ 7. Waking at night with the urge to urinate

_____ 8. The inner structure of the kidney that connects to the ureters

_____ 9. Bedwetting

_____ 10. Blood in the urine

a. annulus
b. anuria
c. azotemia
d. bladder
e. calyx
d. conus
g. dysuria
h. enuresis
i. epididymis
j. epilose
k. glomerulus
l. hematuria
m. hemialgia
n. nocturia
o. oliguria
p. orchialgia
q. parenchyma
r. renal pelvis
s. urethra
t. vas deferens

Part 2

_____ 1. A division in the kidney pelvis that receives the urine

_____ 2. Reduced urinary output

_____ 3. The tubes that connect the kidney to the bladder

_____ 4. A small round structure in the kidney body that filters blood and forms urine

_____ 5. Presence of pus in the urine

_____ 6. Toxic levels of urea in the blood; caused by kidney malfunction

_____ 7. The presence of urea in the blood

_____ 8. White residue that may be deposited on the skin of a patient with uremia

a. azotemia
b. anuria
c. calyx
d. dysuria
e. glomerulus
f. hematuria
g. oliguria
h. pyuria
i. renal parenchyma
j. uremia
k. uremic frost
l. ureters
m. vas aberrans

OBJECTIVE 2

Choose the correct word or phrase to complete statements about diseases and disorders of the urinary system. Write the correct letter in the blank.

_____ 1. Signs and symptoms of urethritis include

a. anuria
b. dysuria
c. hematuria
d. nocturia

_____ 2. Health care management for patients with urethritis includes

a. analgesics and antispasmodics
b. decreased fluid intake
c. ice packs
d. warm sitz baths

____ 3. Cystitis is a urinary tract infection that begins in the

a. bladder
b. kidney
c. ureter
d. urethra

____ 4. Health care management for patients with cystitis may include

a. prophylactic treatment
b. routine catheterization
c. temporary urinary diversion
d. vaginal irrigation

____ 5. Epididymitis often follows

a. catheterization
b. cystitis
c. gonorrhea
d. mumps

____ 6. Signs and symptoms of epididymitis include

a. abdominal pain
b. dysuria
c. hematuria
d. pyuria

____ 7. When promoting healing for patients with urinary tract infections, you would

a. restrict fluid intake
b. provide low-protein, low-sodium diet
c. encourage bed rest when bleeding occurs
d. provide peri care if patient has catheter

____ 8. The teaching plan for patients with urinary tract infections should include

a. emphasize need for an appropriate diet
b. help patient contact support groups
c. sexual partners may also be infected
d. teach catheter care if needed at home

_____ 9. Patients with chronic pyelonephritis have ___.

a. an infection from other parts of the body that spreads to the kidneys
b. a type of antigen-antibody reaction
c. hereditary bilateral cysts in the kidneys
d. repeated bacterial infections that can damage the kidneys beyond treatment or repair

_____ 10. Acute pyelonephritis is more common in

a. men
b. patients with chronic health problems
c. patients with one functioning kidney
d. women

_____ 11. Signs and symptoms of acute pyelonephritis include

a. flank pain
b. headaches
c. nocturia
d. oliguria

_____ 12. Health care management for patients with acute or chronic pyelonephritis includes

a. antispasmodics
b. bed rest
c. protein restrictions
d. warm sitz baths

_____ 13. When planning for the discharge of a patient with pyelonephritis, your nursing plan should include telling the patient to

a. avoid infecting sexual partners
b. avoid foods that are high in sodium
c. continue taking medication even if symptoms subside
d. watch for signs that require a doctor's attention

_____14. Precipitating factors for acute glomerulonephritis include

a. pregnancy
b. pyelonephritis
c. streptococcal infection
d. trauma

_____15. Health care management for patients with glomerulonephritis includes

a. corticosteroids and diuretics
b. genetic counseling
c. infection prevention
d. protein and sodium restrictions

_____16. Signs and symptoms of acute glomerulonephritis include

a. blurred vision
b. dyspnea on exertion
c. oliguria
d. palpable, enlarged kidneys

_____17. Chronic glomerulonephritis may lead to

a. impotence
b. malignancies
c. renal failure
d. urinary obstruction

_____18. When planning for the discharge of a patient with glomerulonephritis, your nursing plan should include telling the patient to

a. avoid infection
b. continue taking medication even if symptoms subside
c. eat a high protein diet
d. watch for signs that require a doctor's attention

_____19. Nephrotic syndrome is a group of symptoms resulting from

a. urolithiasis
b. damage to the glomeruli
c. malignant tumors
d. sexually transmitted diseases

_____ 20. Health care management for patients with nephrotic syndrome includes

a. analgesics
b. dialysis
c. high-protein diet
d. high-sodium diet

_____ 21. Polycystic kidney disease is characterized by

a. cysts throughout the kidney structure
b. cysts in the renal pelvis
c. cysts in one or both ureters
d. cysts in the glomerulus

_____ 22. Signs and symptoms of polycystic kidney disease include

a. abdominal and flank pain
b. dysuria
c. nausea and vomiting
d. weak urine stream

Kevin Katz was recently treated for gonorrhea. Today he came to the hospital complaining of chills, fever, and severe scrotal pain. His admitting diagnosis is epididymitis. You are Mr. Katz's nurse.

Questions 23-25 apply to the above situation.

_____ 23. Mr. Katz's urine may contain

a. blood
b. casts
c. ketones
d. pus

_____ 24. Pain-relieving measures you can provide for Mr. Katz include

a. gentle massage of the scrotal area
b. scrotal support
c. witch hazel compresses
d. warm sitz baths

_____ 25. Medications that may be prescribed for Mr. Katz include

a. analgesics
b. antispasmodics
c. chemolytic agents
d. narcotics

OBJECTIVE 3

Choose the correct word or phrase to complete statements about obstructive diseases and disorders of the urinary system. Write the correct letter in the blank.

_____ 1. A condition that is more common in men because of the length of the urethra is ___.

- a. urolithiasis
- b. urethral strictures
- c. hydronephrosis
- d. urethral tumors

_____ 2. A patient whose urine stream seems to spray or "fork" may have

- a. urolithiasis.
- b. urethral strictures
- c. hydronephrosis
- d. prostatitis

_____ 3. Causes of urolithiasis include

- a. exposure to certain chemicals
- b. orchitis
- c. prolonged immobility
- d. tumors

_____ 4. Signs and symptoms of gradual hydronephrosis include

- a. dull flank pain
- b. nausea and vomiting
- c. sudden, severe pain
- d. weight loss

_____ 5. When planning for the discharge of a patient with hydronephrosis, your teaching plan should include

- a. contacting support groups
- b. discussing infection prevention
- c. emphasizing the need to follow a special diet
- d. teaching perineal hygiene methods if needed

_____ 6. Benign tumors of the urinary system are most commonly found in the

- a. bladder
- b. kidneys
- c. ureters
- d. urethra

_____ 7. Signs and symptoms of benign tumors of the urinary system include

a. dysuria
b. hematuria
c. pain
d. edema

_____ 8. Malignant tumors of the urinary system are most commonly found in the

a. bladder
b. nephrons
c. ureters
d. urethra

_____ 9. Malignant tumors of the urinary system are most commonly found in

a. men ages 50-70
b. men under 40
c. women ages 50-70
d. women under 40

OBJECTIVE 4

Choose the correct word or phrase to complete statements about diseases and disorders of the prostate gland. Write the correct letter in the blank.

_____ 1. Patients with acute prostatitis should avoid

a. immobilization
b. intercourse
c. high-protein foods
d. very cold foods

_____ 2. Signs and symptoms of prostatitis include

a. anuria
b. hard, large, palpable prostate
c. low back and perineal pain
d. pus in urine

_____ 3. Signs and symptoms of benign prostatic hypertrophy include

a. dysuria
b. hematuria
c. signs of peritonitis
d. urgency

_____ 4. When planning for the discharge of a patient with benign prostatic hypertrophy, your teaching plan should include:

a. assure the patient that urinary incontinence will not occur
b. help the patient find support groups to deal with loss of sexual function
c. instruct patient to avoid vigorous exercise, heavy lifting, intercourse, or driving for three weeks
d. instruct the patient to contact the physician immediately if pain or urinary incontinence is noted

_____ 5. Regular rectal examinations are important to detect prostate cancer in men ages _____ and over.

a. 30
b. 40
c. 50
d. 60

_____ 6. Signs and symptoms of prostate cancer include

a. hematuria
b. dysuria
c. oliguria
d. incontinence

OBJECTIVE 5

Choose the correct word or phrase to complete statements about traumatic injuries to the urinary system. Write the correct letter in the blank.

_____ 1. Traumatic injuries to the urinary system are usually a result of all the following EXCEPT ___.

a. motor vehicle accidents
b. falls or athletic injuries
c. stabbing or gunshot wounds
d. infections or hemorrhage

_____ 2. Kidney injuries can be caused by ___.

a. tearing or lacerations
b. back injuries or rib fractures
c. pelvic fractures
d. abrasions

_____ 3. Complications of kidney trauma include

a. decreased urinary production
b. hypertension
c. hemorrhage
d. peritonitis

_____ 4. Signs and symptoms of kidney trauma include

a. bleeding from urinary meatus
b. signs of peritonitis
c. swelling or discoloration of perineum
d. urinary output low or absent

_____ 5. Signs and symptoms of ureteral trauma include

a. bleeding from urinary meatus
b. signs of peritonitis
c. swelling or discoloration of perineum
d. urinary output extremely high

_____ 6. Signs and symptoms of bladder trauma include

a. bleeding from urinary meatus
b. rigid abdomen
c. swelling or discoloration of perineum
d. urinary output extremely high

_____ 7. Signs and symptoms of urethral trauma include

a. failure to void
b. nausea and vomiting
c. rigid abdomen
d. swelling or discoloration of perineum

OBJECTIVE 6

Choose the correct word or phrase to complete statements about renal failure and types of dialysis. Write the correct letter in the blank.

_____ 1. Causes of acute renal failure include

a. blood or fluid loss
b. hypertension
c. metabolic diseases
d. repeated infections or obstructions

_____ 2. Signs and symptoms of acute renal failure include

a. anemia
b. edema
c. muscle twitching
d. uremic frost

_____ 3. Signs and symptoms of chronic renal failure include

a. cardiac arrhythmias
b. confusion
c. GI bleeding
d. hyperpigmentation

_____ 4. The nursing plan for patients with renal failure includes

a. encourage patient to turn, cough, and deep breathe
b. keep patient positioned on back or side
c. provide diet low in calories and protein
d. use clean technique when caring for catheter insertion site

_____ 5. Removal of body wastes from the blood is known as ___.

a. continuous ambulatory peritoneal dialysis
b. hemodialysis
c. intermittent dialysis
d. peritoneal dialysis

_____ 6. Allowing patients to perform dialysis at home is a characteristic of

a. continuous ambulatory peritoneal dialysis
b. ambulatory hemodialysis
c. intermittent dialysis
d. peritoneal dialysis

OBJECTIVE 7 **Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the urinary system.** Write the correct letter in the blank.

_____ 1. Health care management for patients with exstrophy of the bladder includes

- a. keep infant positioned on stomach or side
- b. prevent skin excoriation from constant contact with urine
- c. prevent parents and caregivers from palpating the abdomen
- d. keep exposed bladder moist

_____ 2. When planning for the discharge of a patient with exstrophy of the bladder, your teaching plan should include

- a. emphasize the importance of follow-up care
- b. teach parents to care for infant receiving chemotherapy
- c. teach parents to care for infant before and after surgery
- d. discuss special dietary needs

_____ 3. Epispadias is defined as a urethral opening that is located

- a. in the vagina
- b. on the dorsal surface of the penis
- c. on the lower surface of the penis
- d. in the scrotum

_____ 4. Surgeries for phimosis include

- a. circumcision
- b. orchiopexy
- c. penectomy
- d. plastic surgery

_____ 5. When implementing the plan to promote healing for a patient with Wilm's tumor, you would

- a. provide a high-protein, low-sodium diet
- b. position child on side or stomach
- c. teach parents to care for colostomy
- d. warn parents and caregivers against palpating abdomen

OBJECTIVE 8

Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the urinary system. Write the correct letter in the blank.

_____ 1. Your patient is asking questions about the cystectomy he is going to have tomorrow. The best procedure at this time is to ___.

a. explain and obtain a completed informed consent
b. increase the patient's understanding of the preoperative procedures that may be ordered by the physician
c. reinforce the physician's explanation of the procedure with an explanation or drawing
d. teach the patient to splint the incisional area while turning, coughing and breathing deeply

_____ 2. Your patient is inquiring about her postoperative care. She is worried about being in pain. The best procedure at this time is to ___.

a. reinforce the physician's explanation of the procedure with an explanation or drawing
b. give reassurance when teaching to observe for symptoms of hemorrhage
c. explain that a strict record of urinary intake and output will be kept
d. reinforce that prescribed medications will be given pre- and postoperatively as ordered

_____ 3. Your patient refuses to eat the day before his surgery, telling you that his stomach is upset. He has not asked any questions about his surgery, but he seems very nervous. The best procedure at this time is to ___.

a. encourage the patient to express feelings of fear and anxiety
b. explain that vital signs will be taken often before and after the surgical procedure
c. explain that laboratory values will be evaluated, and any abnormalities will be reported
d. reinforce the physician's explanation of the procedure with an explanation or drawing

_____ 4. Your patient is complaining about being catheterized, and says "sticking all those tubes in me must be unsafe — what if I catch something?." The best procedure at this time is to _____.

a. teach the patient to recognize symptoms that should be reported to the nurse or physician
b. explain that a sterile technique will be used when handling catheters
c. reinforce the physician's explanation of the procedure with an explanation or drawing
d. increase the patient's understanding of the preoperative procedures that may be ordered by the physician

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NOTE: Objectives 9 and 10 are evaluated on Job Sheets/ Assignment Sheet in this unit. If you have not completed these components, see your instructor.

WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

IX

OBJECTIVE 1

Part 1		Part 2	
1. d	6. s	1. c	6. j
2. b	7. n	2. g	7. a
3. t	8. r	3. l	8. k
4. i	9. h	4. e	
5. g	10. l	5. h	

OBJECTIVE 2

1. b	6. d	11. a	16. b	21. a
2. d	7. d	12. b	17. c	22. a
3. d	8. c	13. c	18. a	23. d
4. a	9. d	14. c	19. b	24. b
5. c	10. b	15. d	20. c	25. a

OBJECTIVE 3

1. b	6. a
2. b	7. b
3. c	8. a
4. a	9. a
5. d	

OBJECTIVE 4

1. b
2. c
3. a
4. c
5. b
6. a

OBJECTIVE 5

1. d
2. b
3. c
4. a
5. b
6. c
7. a

OBJECTIVE 6	1.	a
	2.	b
	3.	d
	4.	a
	5.	b
	6.	a
OBJECTIVE 7	1.	b
	2.	c
	3.	b
	4.	a
	5.	d
OBJECTIVE 8	1.	c
	2.	d
	3.	a
	4.	b

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

X

INTRODUCTION

The vital organs of the human body cannot survive without oxygen. In the process of respiration, the lungs serve as the means of gas exchange between the body and the atmosphere, taking in oxygen and releasing carbon dioxide.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the respiratory tract and the associated nursing processes. In addition, you will be able to write care plans and perform basic procedures for patients with these disorders. You will demonstrate these competencies by completing Assignment Sheets, Job Sheets, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the respiratory system to their correct definitions.
2. Choose the correct word or phrase to complete statements about diseases and disorders of the upper respiratory tract.
3. Choose the correct word or phrase to complete statements about diseases and disorders of the lower respiratory tract.
4. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the respiratory system.
5. Plan care for patients with diseases and disorders of the respiratory system. (Assignment Sheet 1)
6. Develop a plan of care for a patient with a chest tube. (Assignment Sheet 2)

7. Develop a teaching plan for a patient with COPD. (Assignment Sheet 3)
8. Develop a plan of care for a patient experiencing chest trauma or surgery. (Assignment Sheet 4)
9. Perform a respiratory assessment. (Job Sheet 1)
10. Perform basic tracheostomy care. (Job Sheet 2)
11. Perform endotracheal suctioning. (Job Sheet 3)
12. Care for a patient with a chest tube. (Job Sheet 4)

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 – Objective 1, basic information that supports the rest of the unit;

  Part 2 – Objectives 2 and 3, the next two groupings, including diseases of upper and lower respiratory tract, and

  Part 3 – Objective 4, pediatric disorders.
- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a guest speaker to discuss diseases and disorders of the respiratory tract.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet, and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.
- Obtain models and large pictures of the respiratory tract.
- Make a poster of the respiratory tract.
- Make a bulletin board showing the respiratory tract.
- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration
  - Assist students to conduct a chapter service project on diseases and disorders of the respiratory system.
  - Develop objectives for service project and identify a theme.
  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.
  - Plan a community or school health project that involves disseminating pamphlets about diseases and disorders of the respiratory system.
  - Develop and/or participate in a community teaching project that involves diseases and disorders of the respiratory system.
- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.
- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the respiratory system to their correct definitions.

- Discuss terms associated with the respiratory system.
- Have students play reinforcement games and work crossword puzzles using terms.
- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about diseases and disorders of the upper respiratory tract.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the upper respiratory tract.
- Have students share ideas that might be helpful in evaluating diseases and disorders of the upper respiratory tract.
- Discuss other diseases and disorders not mentioned in this unit.

- Review the anatomy of the upper respiratory tract.
- Have the students complete Assignment Sheet 1
- Discuss ways in which nurses could improve the care of patients with diseases and disorders of the upper respiratory tract.

Objective 3: Choose the correct word or phrase to complete statements about diseases and disorders of the lower respiratory tract.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the lower respiratory tract.
- Have students share ideas that might be helpful in evaluating diseases and disorders of the lower respiratory tract.
- Discuss other diseases and disorders not mentioned in this unit.
- Review the anatomy of the lower respiratory tract.
- Have students complete Assignment Sheets 2-4
- Discuss ways in which nurses could improve the care of patients with diseases and disorders of the lower respiratory tract.

Objective 4: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the respiratory system.

- Have students share relevant incidents about friends or family members who have problems related to pediatric diseases and disorders of the respiratory system.
- Have students share ideas that might be helpful in evaluating pediatric diseases and disorders of the respiratory system.
- Discuss other diseases and disorders not mentioned in this unit.

APPLICATION

- Make a video or skit having to do with care of a person with problems associated with the respiratory system. Either the students or teachers can be the presenters.
- Students can practice care of the patient with problems associated with this unit.

- Have students present a two-minute speech on care of a patient with problems associated with the respiratory system.

Objective 5: Plan care for patients with diseases and disorders of the respiratory system. (Assignment Sheet 1)

- Use Assignment Sheet 1 to give students an opportunity to practice ideas that will help when they care for a patient with a respiratory problem.

- Have students present a one-minute speech on care of a patient with respiratory disorders. Use experiences from patients assigned in clinic.

- Provide a care plan form for students' use.

Objective 6: Develop a plan of care for a patient with a chest tube. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give students an opportunity to practice ideas that will help when they care for a patient with a chest tube.

- Have students present a one minute speech on care of a patient with a chest tube. Use experiences from patients assigned in clinic.

Objective 7: Develop a teaching plan for a patient with COPD. (Assignment Sheet 3)

- Use Assignment Sheet 3 to give students an opportunity to practice ideas that will help when they care for a patient with a chronic respiratory disease.

- Have students talk about potential problems that could arise while caring for a patient with respiratory problems.

Objective 8: Develop a plan of care for a patient experiencing chest trauma or surgery. (Assignment Sheet 4)

- Use Assignment Sheet 4 to give students an opportunity to practice ideas that will help when they care for a patient experiencing chest trauma or surgery.

- Have students think about potential problems that could arise with pre-or postoperative patients. Talk about emergency measures and preventative measures.

- Make a bulletin board for the classroom of ideas pertaining to information contained in this unit.

- Provide a care plan form for students' use.

Objective 9: Perform a respiratory assessment. (Job Sheet 1)

- Use Job Sheet 1 to give students hands-on experience in performing a respiratory assessment.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 10: Perform basic tracheostomy care. (Job Sheet 2)

- Use Job Sheet 2 to give students hands-on experience in performing basic tracheostomy care.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 11: Perform endotracheal suctioning. (Job Sheet 3)

- Use Job Sheet 3 to give students hands-on experience in endotracheal suctioning.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 12: Care for a patient with a chest tube. (Job Sheet 4)

- Use Job Sheet 4 to give students hands-on experience in caring for a patient with a chest tube.
- Use a mannequin to practice and demonstrate procedures in the classroom.

EVALUATION

Pretest

- Give Written Test as pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.

- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.
- Complete appropriate sections of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.
- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *American Institute for Cancer Research Newsletter*, 1759 R. Street, N.W., Washington, D.C. 20009.
- *University of California Berkeley Wellness Letter*, 48 Shattuck Square, Suite 43, Berkeley, CA 94704-1140.

UNIT REFERENCES

- Betz, Cecily Lynn, and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St. Louis: Mosby-Year Book, Inc., 1991.
- *Core Curriculum on Tuberculosis* (2nd ed.). Atlanta: Division of Tuberculosis Elimination, Centers for Disease Control, 1991.
- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.
- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.
- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.
- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.
- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C.V. Mosby Company, 1990.

OBJECTIVE 1

Match terms associated with diseases and disorders of the respiratory system to their correct definitions.

- **clubbing** — Curvature of the nails and soft tissue enlargement of the fingers and toes; seen with chronic respiratory diseases
- **cyanosis** — Slight blue-gray discoloration of skin
- **deviated septum** — Obstruction of nasal passages due to irregularities in the bone and cartilage
- **diaphoresis** — Profuse perspiration
- **embolus** — A mass of foreign material or air bubble circulating in the bloodstream
- **exudate** — Fluid containing pus
- **friction rub** — Grating sound heard on auscultation
- **hemoptysis** — Expectoration of blood from the oral cavity, larynx or lungs
- **hypercapnia** — Excess carbon dioxide in the blood
- **hypertrophied adenoids** — Obstruction of nasal passages due to swelling and growth of adenoids
- **hypoxemia** — Insufficient oxygenation of the blood
- **polyps** — Grape-like swellings that may be caused by chronic irritation
- **rhinorrhea** — Watery nasal discharge
- **shock** — Syndrome with varying degrees of disturbances of oxygen supply to the body
- **suppuration** — The formation of pus pockets
- **syncope** — Loss of consciousness or fainting related to lack of normal blood supply to the brain
- **thrombus** — A blood clot that attaches to the wall of a blood vessel and blocks the lumen

OBJECTIVE 2

Choose the correct word or phrase to complete statements about diseases and disorders of the upper respiratory tract.

Description and etiology

Rhinitis—Inflammation of the mucosa of the nose; often occurs with *coryza* (the common cold). Rhinitis caused by allergens is also called *hay fever*.

Causes

- Viral infection
- Allergens
- Overuse of nose drops

Health care management

- Rest
- Increased fluid intake
- Medications: analgesics, antipyretics, vasoconstrictors, antihistamines, decongestants, intranasal steroid spray

ASSESSMENT

Signs and symptoms

Rhinitis

- Early: dry mucous membranes
- Malaise
- Watery nasal discharge
- Tearing
- Low-grade fever
- Itching of eyes and nose (allergic reaction)

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

RHINITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Assist in determining cause through patient history
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan – Caution patient not to blow nose too hard or too frequently – Instruct patient on the use of vasoconstricting drops or sprays – Warn patient against driving or operating machinery when using antihistamines

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Sinusitis — Inflammation of the sinuses. The condition may be acute or chronic.

Causes

- Upper respiratory infection (viral, bacterial, or fungal)
- Allergic reaction
- Tooth extraction or abscess

Health care management

- Rest
- Steam inhalation
- Increased fluid intake

- Hot, moist compresses to relieve pain
- Medications: analgesics, vasoconstrictors, antihistamines, antibiotics, decongestants
- Surgeries: Caldwell-Luc operation, antral irrigation, ethmoidotomy, sphenoidotomy, ethmoidectomy, osteopathic flap
- Complications: meningitis, osteomyelitis, septicemia, abscesses of the brain or orbital area

ASSESSMENT

Sinusitis

Signs and symptoms

- Severe headache
- Nasal discharge
- Malaise
- Pain over affected sinus
- Anorexia or nausea
- Edema of orbital area
- Loss of sense of smell

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

SINUSITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Encourage patient to maintain bed rest • Instruct patient to use steam or cool mist vaporizer • Encourage increase of fluid intake • Administer medications • Provide pre- and postoperative care as needed
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications

• Plan for patient's discharge	• Prepare teaching plan – Instruct patient on the use of oral decongestants and nasal drops or sprays – Post-surgical patients should avoid blowing nose or wearing dentures and should use gentle oral hygiene – Instruct patient to contact physician at first signs of infection – Warn patient against driving or operating machinery when using antihistamines

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NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Pharyngitis—Inflammation of the pharynx. Pharyngitis often occurs with rhinitis and sinusitis. *Strep throat* is a specific type of pharyngitis caused by streptococcal organisms.

NOTE: Young children with repeated strep throat infections may develop rheumatic fever if not treated early, which can result in mitral valve damage. Untreated strep throat can cause glomerulonephritis in adults.

Causes

- Viral or bacterial infection
- Exposure to dust
- Habitual use of tobacco

Health care management

- Rest
- Throat rinses or gargles
- Pain relief
- Early treatment is important to prevent complications
- Medications: antibiotics, analgesics, antipyretics
- Complications: rheumatic fever, bacterial endocarditis, glomerulonephritis

ASSESSMENT

Pharyngitis

Signs and symptoms

- Strep throat in adults:
  - Fever and chills
  - Headache
  - Malaise
  - Rapid onset of throat pain
- Strep throat in children:
  - Adult symptoms
  - Abdominal pain
  - Nausea and vomiting
- Dry cough
- Sore, reddened throat
- Difficulty swallowing

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PHARYNGITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Encourage bed rest and increased fluid intake
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Instruct patient in the use of nasal drops or sprays – Instruct patient to use warm saline gargles – Stress the need to finish taking all medications, even if symptoms subside

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Laryngitis — Inflammation of the larynx. Laryngitis may be acute or chronic, and often occurs with other respiratory infections.

Causes

- Overuse of the voice
- Upper respiratory infection
- External irritants, especially smoking

Health care management

- Remove causative factors
- Steam inhalation
- Voice rest
- Medications: antibiotics, analgesics, antipyretics

ASSESSMENT

Signs and symptoms

Laryngitis

- Husky voice or voice loss
- Throat pain
- Cough (may be dry or productive)
- Scratchy throat

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

LARYNGITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Encourage patient to rest voice until mucous membranes are healed • Administer medications
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan – Encourage patient to avoid exposure to irritants

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Obstructions** — Blockage of the normal breathing passages.
Causes	• Polyps • Deviated septum • Hypertrophied adenoids • Tumors • Trauma
Health care management	• Medications: vasoconstrictors, corticosteroids, antihistamines • Surgeries: nasal polypectomy, submucous resection, nasoseptoplasty, rhinoplasty

ASSESSMENT	**Signs and symptoms**
Obstructions	• Dyspnea • Noisy breathing • Discharge or bleeding from nose • Obstruction of breathing • Signs of trauma
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

OBSTRUCTIONS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care as needed
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Instruct postsurgical patients to avoid blowing the nose for 48 hours after removal of nasal packing – Instruct patient in the use of steam or cool mist vaporizer – Warn patient against driving or operating machinery when using antihistamines

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

- **Tonsillitis** — Inflammation of the tonsils.

Causes

- Viral or bacterial infection

Health care management

- Bed rest
- Increased fluid intake
- Post-surgical patients must be watched for signs of bleeding that could lead to hemorrhaging (such as frequent swallowing from blood running down the back of the throat)
- Medications: analgesics, antipyretics, antibiotics
- Surgeries: tonsillectomy

ASSESSMENT

Signs and symptoms

Tonsillitis

- Sore throat
- Fever and chills
- Enlarged tonsils
- Dysphagia
- Malaise

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

TONSILLITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Encourage bed rest and increased fluid intake • Give ice-cold, bland diet after surgery
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for hemorrhage – Use flashlight and tongue depressor to observe back of throat for signs of bleeding

- Plan for patient's discharge
- Prepare teaching plan
  - Avoid coughing, sneezing, clearing throat, and vigorous nose blowing for 1-2 weeks postoperative
  - Avoid strenuous exercise for 1-2 weeks postoperative

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Cancer – Cancers of the upper respiratory tract include nasopharyngeal carcinomas and sinus carcinomas. Cancers of the tonsils include carcinomas, lymphoepitheliomas, or lymphosarcomas of the tonsils. The most common malignancy of the upper respiratory tract is squamous cell carcinoma of the larynx.

Causes

- Smoking
- Overuse of the voice
- Alcohol use
- Chronic laryngitis

Health care management

- Treatment depends on the location and extent of the malignancy
- Radiation therapy and chemotherapy may be used
- Medications: antibiotics, analgesics
- Surgeries: maxillectomy, orbital exenteration, laryngectomy, neck dissection
- Complications: meningitis

ASSESSMENT | **Signs and symptoms**

Cancer

- Nasopharyngeal
  - Nasal obstruction
  - Nosebleeds
- Sinus
  - Nasal obstruction
  - Nosebleeds
  - Eye displacement
  - Loosening of upper teeth
  - Tearing
- Tonsil
  - Enlarged tonsil
  - Earache
  - Ulceration
- Larynx
  - Hoarseness
  - Productive cough
  - Pain in Adam's apple radiating to ear (late stages)
  - Feeling of lump in throat (late stages)

ANALYSIS | Report findings to RN who will assimilate information for analysis and nursing care.

CANCER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide supportive care • Manage hyperalimentation
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications

• Plan for patient's discharge	• Prepare teaching plan – Teach patient to care for tracheostomy – Help patient contact support groups – Encourage patient to participate in speech therapy

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about diseases and disorders of the lower respiratory tract.

Description and etiology

Influenza – Common, acute respiratory infection. Influenza can be fatal in the very young, very old, or chronically ill patient. A vaccine is available for high-risk patients.

Causes

- Virus

Health care management

- Symptomatic relief
- Bed rest
- Medications: analgesics, antipyretics, decongestants

ASSESSMENT

Signs and symptoms

Influenza

- Malaise
- Fever and chills
- Rhinorrhea
- Cough
- Sore throat
- Headache and muscle pain

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

INFLUENZA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide supportive care • Administer medications • Encourage increased fluid intake
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Encourage adequate rest and fluid intake – Instruct patient in the use of steam or cool mist vaporizer

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Bronchitis** — Acute or chronic inflammation of the mucous membranes of the bronchial tubes. Repeated infections can result in progressive destruction of alveolar sacs. Bronchitis is often secondary to infections of the upper respiratory tract.
Causes	• Viral infections • Smoking • External irritants
Health care management	• Treat underlying cause • Symptomatic relief • Increased fluid intake

- Prevent further infection
- Medications: cough suppressants, antitussives, antipyretics, antibiotics, bronchodilators
- Complications: COPD

ASSESSMENT **Signs and symptoms**

Bronchitis

- Non-productive cough that later becomes productive
- Pain and tightness in chest
- Malaise
- Scratchy, dry throat
- Muscle pains
- Chills
- Hoarseness

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

BRONCHITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Instruct patient to use steam or cool mist vaporizer • Encourage increased fluid intake • Encourage bed rest
• Continually monitor patient's condition	• Monitor vital signs, I/O • Assess respiratory status
• Plan for patient's discharge	• Prepare teaching plan – Patients with chronic disease should avoid contact with people who have upper respiratory infections – Discuss avoidance of precipitating factors, such as smoking

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Bronchiectasis — Destruction of the bronchial walls that results in chronic dilation of the bronchi and bronchioles. The condition may be limited to one segment or widespread.

Causes

- Pulmonary infections
- Aspiration of foreign material

Health care management

- Infection prevention
- Postural drainage
- Increased fluid intake to thin secretions
- Medications: expectorants, bronchodilators, antibiotics
- Surgeries: segmental resection

ASSESSMENT

Bronchiectasis

Signs and symptoms

- Persistent, productive cough
- Foul, greenish-yellow sputum
- Fatigue
- Dyspnea
- Wheezing
- Halitosis
- Hemoptysis
- Anorexia and weight loss

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

BRONCHIECTASIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Instruct patient to use steam or cool mist vaporizer • Perform postural drainage if prescribed • Provide pre- and postoperative care as needed
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Stress the need to avoid people with upper respiratory infections – Encourage patient to stop smoking – Patient should avoid air pollution

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Lung abscess** — Localized area of suppuration.
Causes	• Aspiration of foreign body or material • Obstruction • Pulmonary embolism • Pulmonary disease
Health care management	• Postural drainage • Chest drainage

- High-protein, high-calorie diet
- Medications: antibiotics, antipyretics
- Surgeries: segmental resection, lobectomy

ASSESSMENT **Signs and symptoms**

Lung abscess

- Productive cough with purulent or bloody sputum
- Malaise
- Chest pain
- Headache
- Clubbed fingers
- Weight loss
- Anemia
- Dyspnea

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

LUNG ABSCESS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care as needed • Perform postural drainage if prescribed • Provide meals high in calories and protein • Encourage increased fluid intake • Assist with procedure to drain affected area • Use aseptic technique when changing dressings
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor and measure sputum • Monitor drainage system if chest tubes in place • Observe for complications

• Plan for patient's discharge	• Prepare teaching plan – Stress that patient must continue taking medications until course is finished – Emphasize the need for adequate rest, fluids, and nutrition

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NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology	**Empyema** — Formation of pus in the pleural space.
Causes	• Complication of thoracic surgery
Health care management	• Removal of fluid through tube drainage, open drainage, or thoracentesis • Bed rest • Patient should cough and deep breathe every two hours • Medications: antibiotics • Surgeries: thoracentesis, chest tube insertion
ASSESSMENT	**Signs and symptoms**
Empyema	• Dyspnea • Anxiety • Flaring of nares • Fever and chills • Sweating

Description and etiology	**Pleural effusion** – Accumulation of fluid in the pleural space.
Causes	• Cancer • Pulmonary infection • Congestive heart failure • Kidney disease
Health care management	• Same as empyema
ASSESSMENT	**Signs and symptoms**
Pleural effusion	• Same as empyema
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

EMPYEMA and PLEURAL EFFUSION

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care as needed • Monitor drainage system • Administer medications • Encourage coughing and deep breathing as needed • Encourage bed rest
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor drainage
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes.

- Contribute to plan of care update.

Description and etiology

Cancer — Lung cancer is the leading cause of cancer death in both men and women. Tumors may be primary or metastatic.

Causes

- Smoking
- Familial tendency
- Occupational exposure to irritants

Health care management

- Symptomatic relief
- Prevent infection
- Encourage patient to eat frequent small meals that are high in calories and protein
- Medications: antineoplastics, narcotics, antipyretics, antiemetics
- Surgeries: segmental resection, lobectomy, pneumonectomy

ASSESSMENT

Signs and symptoms

Lung cancer

- Productive cough with blood-streaked sputum
- Hemoptysis
- Hoarseness
- Fatigue
- Difficulty breathing
- Anorexia and weight loss
- Chest pain

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

LUNG CANCER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Monitor drainage systems if chest tubes in place
• Plan for patient's discharge	• Prepare teaching plan – Teach coughing techniques – Stress the need to get adequate nutrition and exercise – Encourage patient to stop smoking – Discuss signs of metastasis or recurrence

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Pneumonia — Inflammation of the lung.

Causes

- Bacterial infection
- Viral infection
- Aspiration of foreign substances
- Constantly remaining in one position (hypostatic pneumonia)

Health care management

- Prevent spread of infection
- Encourage coughing if it is productive

- Use percussion and postural drainage to help remove secretions
- Encourage rest
- Medications: antibiotics, narcotics, analgesics, antipyretics, expectorants, bronchodilators
- Complications: hypotension, shock, pleural effusion, superinfection, congestive heart failure, pericarditis, myocarditis

ASSESSMENT

Signs and symptoms

Pneumonia

- Sudden onset of chills
- Rapidly rising fever
- Stabbing chest pain
- Productive cough
- Rapid, bounding pulse
- Diaphoresis
- Flushed cheeks
- Cyanotic nailbeds and lips
- Purulent sputum streaked with blood
- Abnormal breath sounds such as gurgling or grunting

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PNEUMONIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Encourage bed rest and increased fluid intake • Administer medications • Provide postural drainage if prescribed • Administer oxygen if prescribed
• Continually monitor patient's condition	• Monitor vital signs, I/O, breath sounds • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Instruct on use of steam or cool mist vaporizer – Teach hygiene practices to prevent spread of infection – Teach effective coughing methods

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Bronchial asthma — Shortness of breath accompanied by wheezing; caused by spasms in the bronchial tubes or swelling of their mucous membranes.

Causes

- Response to allergens
- Response to drugs or toxins
- Infections
- Exposure to cold
- Changes in barometric pressure
- Exercise

- Emotional distress

Health care management

- Avoid infection and causative factors
- Increase fluid intake
- Maintain optimum health
- Medications: adrenergics, methylxanthines, cromolyn sodium, corticosteroids, anticholinergics, bronchodilators

ASSESSMENT

Signs and symptoms

Bronchial asthma

- Symptoms are precipitated by exposure to causative factor
- Wheezing
- Sensation of suffocation
- Dry cough
- Tightness of chest
- Anxiety
- Cyanosis of nailbeds and lips
- Profuse diaphoresis

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

BRONCHIAL ASTHMA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide steam or cool mist vaporizer • Encourage adequate nutrition and increased fluid intake • Assist with allergy testing
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Monitor respiratory status
• Plan for patient's discharge	• Prepare teaching plan – Teach patient correct dosage and use of medications – Emphasize the need to stay healthy – Discuss preventive measures to avoid causative factors

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Pleurisy** — Inflammation of the *pleura*, the serous membranes that enfold both lungs.
Causes	• Pulmonary disease • Viral or bacterial infection
Health care management	• Pain relief (intercostal block) • Position patient on affected side • Treat underlying disease

	• Medications: antibiotics, analgesics, antipyretics
ASSESSMENT	**Signs and symptoms**
Pleurisy	• Sharp pain on inspiration • Dyspnea • Fever • Friction rub heard on auscultation
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

PLEURISY

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Assist with intercostal block • Position patient on affected side • Apply local warm or cool compresses • Splint patient to aid coughing
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Instruct patient to seek medical attention if symptoms reappear

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology

Pulmonary tuberculosis — Infection of the lungs caused by *Mycobacterium tuberculosis*, an airborne bacillus. The incidence of infectious tuberculosis has been increasing in recent years. Persons at a higher risk of infection include close contacts of those with infectious tuberculosis, those originally from high-prevalence areas of the world (Asia, Africa, and Latin America), low-income populations (especially African-Americans, Hispanics, and Native Americans), alcoholics, intravenous drug users, and persons in long-term care facilities such as nursing homes or correctional facilities. Health-care workers who work in emergency rooms and/or care for these high-risk populations are also at a higher risk. About 10% of all persons infected by tubercle bacilli eventually develop active disease in their lifetime, although certain populations are at a much greater risk.

Risk factors

NOTE: People with these risk factors are at a higher risk of *developing active tuberculosis after becoming infected*, not at a higher risk of infection.

- Chronic illness
  - HIV infection
  - Diabetes mellitus
  - End-stage renal disease
- Immunosuppressive therapy or prolonged corticosteroid therapy
- Body weight of 10% or more below ideal weight

Health care management

- Prevent spread of infection
- Prevent complications
- Prompt, thorough treatment is important in preventing the spread of infection
- Patients with active tuberculosis should be kept in isolation
- Medications: antimicrobes

ASSESSMENT

Pulmonary tuberculosis

Signs and symptoms

- Early symptoms
  - Fatigue
  - Anorexia and weight loss
  - Pallor
  - Slight cough
  - Elevated temperature in afternoon
  - Night sweats
  - Indigestion

- Advanced symptoms
  - Productive cough
  - Hemoptysis
  - Rapid loss of weight and strength
  - Chest and abdominal pain

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

PULMONARY TUBERCULOSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide supportive care • Administer medications • Provide isolation in early stages • Maintain septic technique • Provide nutritious diet and increased fluids
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Instruct patient and family in aseptic technique – Emphasize that patient should cover mouth and nose when coughing – Stress the need to continue taking medication as prescribed; course of medication may take longer than 1 year – Encourage non-stressful environment

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Emphysema — A type of chronic obstructive pulmonary disease (COPD). The condition is characterized by an increase beyond the normal size of air spaces distal to the terminal bronchiole, with destructive changes in bronchiole walls.

NOTE: *Chronic obstructive pulmonary disease* is used as an overall term to label conditions of patients with diseases or disorders that structurally destroy the alveolar sacs by overextension and rupture. Other types of COPD are chronic bronchitis and bronchiectasis.

Causes

- Cigarette smoking
- External irritants
- Allergies
- Infection

Health care management

- Eliminate exposure to irritants
- Postural drainage and/or bronchoscopic removal of secretions
- Symptomatic relief
- Medications: bronchodilators, corticosteroids, antibiotics, diuretics

ASSESSMENT

Signs and symptoms

Emphysema

- Exertional dyspnea
- Cough
- Fatigue
- Weight loss
- Barrel chest

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

EMPHYSEMA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Encourage coughing and deep breathing • Encourage increased fluid intake • Assist with drainage and suctioning • Provide steam or cool mist vaporizer • Provide postural drainage
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Teach effective breathing and coughing techniques – Encourage patient to increase fluid intake and use steam or cool mist vaporizer – Stress the importance of good nutrition and adequate rest for good general health – Emphasize the need to avoid irritants, especially cigarette smoke – Stress infection prevention – Teach patient to use nebulized medication – Discuss symptoms that should be reported to the physician

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology

Pulmonary embolism — Occlusion of one or more pulmonary arteries by an embolus. The embolus may originate as a thrombus in the venous system or in the right side of the heart that becomes dislodged, or an air or fatty embolus may be responsible. An infarction may occur in the lung tissue due to the interruption of the blood supply.

Risk factors

- Pregnancy or recently giving birth
- Long-term use of oral contraceptives
- Immobilization
- Prolonged sitting or standing
- Recent surgery
- Obesity
- Congestive heart failure
- Mitral valve stenosis
- Trauma (especially fractures of the long bones)
- History of thrombophlebitis

Health care management

- Preventive measures in high-risk patients
- Restore pulmonary function
- TED hose
- Medications: anticoagulants, fibrinolytic agents, antiplatelets
- Surgeries: Placement of umbrella filter in inferior vena cava, surgical removal of embolus

ASSESSMENT

Signs and symptoms

Pulmonary embolism

- Massive
  - Sharp, sudden, substernal pain
  - Rapid, weak pulse
  - Pronounced difficulty breathing
  - Syncope

- Minor
  - Difficulty breathing
  - Fever
  - Cough
  - Hemoptysis
  - Anxiety
  - Weakness
  - Rapid pulse
  - Frothy, pink sputum

Description and etiology

Pneumothorax – Collection of air or gas in the pleural cavity. Internal (such as a tuberculous abscess or burst alveoli) or external factors perforate the pleura, allowing air to be drawn into the pleural space. This causes pressure to build in the pleural space. Without the normal negative pleural pressure, the lung cannot inflate and collapses. A pneumothorax caused by trauma may be closed or open ("sucking chest wound").

Causes

- Trauma
- Pulmonary disease

Health care management

- Immediate care: pressure and bandage over area
- Treat underlying condition
- Chest drainage
- Maintain airway
- Administer oxygen
- Surgeries: thoracotomy, chest tube insertion
- Complications: shock

ASSESSMENT

Signs and symptoms

Pneumothorax

- Sudden, sharp pain in chest
- Dyspnea
- Decrease in breath sounds on affected side
- "Sucking" sound in open chest wound
- Rapid breathing and pulse

- Diaphoresis
- Cyanosis

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

PULMONARY EMBOLISM and PNEUMOTHORAX

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Call for emergency assistance if necessary • Provide emergency care • Administer medications • Provide pre- and postoperative care • Teach effective breathing techniques • Administer oxygen as prescribed • Monitor drainage system if chest tubes in place • Encourage patient to cough and deep breathe
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Monitor respiratory status
• Plan for patient's discharge	• Prepare teaching plan – Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 4

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the respiratory tract.

Description and etiology

Cystic fibrosis – A genetic disease of the exocrine glands. Cystic fibrosis affects many systems, especially the pulmonary and gastrointestinal systems. Thick mucous occludes the bronchioles and bronchi, leading to chronic lung disease.

Causes

- Genetic factors

Health care management

- Teach effective breathing methods
- Postural drainage and percussion
- Prevent infection
- Genetic counseling recommended for parents
- Medications: expectorants, bronchodilators, antihistamines, antibiotics

ASSESSMENT

Signs and symptoms

Cystic fibrosis

- Dry or productive cough
- Wheezing
- Exertional fatigue
- Repeated respiratory infections
- Salty taste to skin
- Failure to thrive

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CYSTIC FIBROSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide supportive care • Administer medications • Perform postural drainage and percussion
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Cystic fibrosis is a chronic, multi-system disease; parents and patient must deal with all facets of the disease – Train parents to perform postural drainage – Help family find support groups – Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Asthma – A chronic, intermittent dyspnea characterized by bronchial spasms, edema of the bronchial mucosa, and increased production of tenacious mucous. Trigger factors include exposure to allergens, respiratory tract infections, emotional excitement or upset, exercise, and changing weather.

Causes

- Genetic factors

Health care management

- Avoidance of trigger factors
- Maintain airway during attacks
- Teach effective breathing techniques

- Medications are often administered by inhaler; teach patients to use inhaler correctly
- Medications: bronchodilators, cromolyn sodium, corticosteroids

ASSESSMENT **Signs and symptoms**

Asthma

- Tightness in chest
- Anxiety or restlessness
- Dyspnea
- Wheezing
- Productive cough
- Cyanosis
- Retractions
- Air hunger

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

ASTHMA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Assist in testing to determine specific allergens • Maintain airway during attacks
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Teach patient to use inhaler and peak flow meter – Emphasize the need to eliminate all allergens, including pets, dust, and specific foods – Emphasize what the child *can* do, not the limitations – Help family contact support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Croup – A term used to describe several respiratory conditions characterized by the same symptoms. Croup usually follows a respiratory infection and tends to affect children under three years old.

Causes

- Viral infection

Health care management

- Reduce laryngeal spasms
- Use high humidity and increase fluid intake to help liquefy secretions
- Medications: emetics, corticosteroids, vasoconstrictors, antipyretics
- Surgeries: tracheostomy

ASSESSMENT

Signs and symptoms

Croup

- "Barking" cough
- Orthopnea
- Stridor on inspiration
- Hoarseness
- Low-grade fever
- Restlessness and anxiety

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CROUP

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Encourage increased fluid intake • Encourage bed rest • Provide pre- and postoperative care as needed
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Monitor respiratory status
• Plan for patient's discharge	• Prepare teaching plan – Teach parents to use steam from shower or vaporizer to treat croup attacks – Emphasize the need for increased fluids; milk should not be given – Warn against using cough syrups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Epiglottitis** – An acute inflammation of the epiglottis and supraglottic tissues that may follow a cold. Epiglottitis is a medical emergency.
Causes	• Bacterial infection (usually *Hemophilus influenzae* type B)
Health care management	• It is extremely important to avoid upsetting the child; any procedures that cause the child to cry or become upset may cause laryngeal spasms • Child should sit upright in parent's lap during examination

- Intubation may be required
- Medications: antibiotics, analgesics
- Surgeries: tracheostomy

ASSESSMENT

Signs and symptoms

Epiglottitis

- Rapid onset of symptoms
- Stridor
- High fever
- Sore throat
- Drooling
- Apprehension and anxiety
- Inability to swallow
- Child keeps chin thrust forward, mouth open
- Exhaustion
- Hoarseness

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

EPIGLOTTITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Call for emergency assistance if necessary • Keep child as calm as possible, preferably sitting upright in parent's lap • Provide pre- and postoperative care • Administer medications • Monitor tubes if present
• Continually monitor patient's condition	• Monitor vital signs, I/O (do not handle child) • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Teach parents to care for tracheostomy

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

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DIAGNOSTIC PROCEDURES

Biopsy – Tissue is obtained from lungs, pleura, lymph nodes, or other respiratory system structures and analyzed for abnormalities such as malignancy.

Bronchoscopy – A bronchoscope is passed through the trachea and bronchi to visualize the larynx, trachea, and bronchi. Patients are under local or general anesthesia.

Chest x-ray – Radiographic visualization of the chest structures.

Computerized topography scan (CT scan) – Radiographic study that uses a computer-controlled scanner to produce three-dimensional images of an organ not usually visualized by x-rays.

Laboratory studies:

- **Arterial blood gases** – Blood is analyzed for pH, carbon dioxide tension, bicarbonate, and oxygen saturation.
- **Pleural fluid analysis** – Pleural fluid is obtained by thoracentesis or thoracotomy and analyzed for presence of blood and other abnormalities.
- **Sputum analysis** – Sputum samples are analyzed for color, odor, consistency, and presence of blood or pathogens.
- **Throat culture** – Throat culture is obtained by swabbing the mucous membranes of the throat; swabbed material is cultured in a medium and analyzed.

Laryngoscopy – Direct or indirect visualization of the larynx. Indirect laryngoscopy is performed using a laryngeal mirror. Direct laryngoscopy, which must be performed under local or general anesthesia, involves passing a laryngoscope into the larynx.

Pulmonary function studies – Lung volume, diffusing capacity, and ventilatory function are measured.

SURGICAL PROCEDURES

Caldwell-Luc operation – Removal of the contents of an infected maxillary sinus through an incision under the upper lip.

Laryngectomy – Removal of part or all of the larynx.

Lobectomy – Removal of one lobe of a lung.

Maxillectomy – Removal of the upper jaw; performed on patients with malignancy of the sinuses.

Neck dissection — Removal of the lymph nodes of the neck. Radical neck dissection includes removal and reconstruction of the jugular vein, sternocleidomastoid muscle, and spinal accessory nerve.

Nasal polypectomy – Removal of a nasal polyp.

Nasoseptoplasty – Plastic reconstruction of the nasal septum.

Orbital exenteration – Removal of an eye; performed on patients with malignancy of the sinuses.

Pneumonectomy – Removal of a lung.

Rhinoplasty – Plastic reconstruction of the exterior portion of the nose; may be done for cosmetic reasons or to repair damage from trauma or disease

Segmental resection – Removal of one or more segments of a lung.

Submucous resection – Repair of a deviated septum; bone and cartilage are removed.

Thoracentesis – Puncturing the chest wall with a large-bore needle to remove fluids

Thoracotomy – An exploratory procedure involving an intercostal incision into the lung.

Tonsillectomy – Removal of the tonsils.

ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

X

Name ________________________________ Score ________

OBJECTIVE 5

Plan care for patients with diseases and disorders of the respiratory system.

INTRODUCTION

In this assignment you are given a case study of a hypothetical patient. Care plans are essentially research projects for each of your patients. Use additional medical-surgical resources to research the condition in more depth and to help you decide on a plan of nursing care.

Van McAnally was admitted to the hospital today with a low-grade fever, headache, nasal discharge, productive cough, and pain. He is tired and has not eaten today. Mr. McAnally tells you he is worried about his condition. His admitting diagnosis is sinusitis.

Supportive care and teaching will be essential elements of the nurse's responsibility during his hospitalization. Patients with respiratory problems suffer symptoms in varying degrees. A nurse can implement measures to reduce anxiety and facilitate healing. Stressing the importance of taking medications and increasing fluid intake are additional nursing duties.

DIRECTIONS

Mr. McAnally is your patient. Your instructor will provide a form to create a plan for his nursing care. The level of oxygen is prescribed by the doctor, and is usually about 2 liters per minute.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

X

Name ________________________________ Score ________

OBJECTIVE 6

Develop a plan of care for a patient with a chest tube.

INTRODUCTION

Chest tubes allow air or fluid to drain from the pleural cavity. The insertion site depends on the patient's condition. The tubes are connected to an underwater sealed system which provides for drainage and lung expansion.

The complex equipment and specialized treatment frighten patients with chest tubes. Attitude is important to the patient's improvement. A nurse who is confident in handling the equipment can convey self-confidence which in turn is reassuring to the patient. The nurse who is observant can help to prevent complications. Careful monitoring and measuring of the system is important in caring for the patient with chest tubes.

David Singh is an 18-year-old who sustained a chest injury in a motorcycle accident. He was rushed by ambulance to the ER with a rapid pulse and respirations, diaphoresis, chest pain, and dizziness. The x-rays showed he had a pneumothorax. A chest tube was inserted, and he was sent to ICU.

DIRECTIONS

Reading Comprehension
- Gain factual information

Language
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Use a medical-surgical text, the situation above, and the information from Assignment Sheet 1 to complete a plan of care for a patient with a chest tube. Refer to Job Sheet 4 for procedures for caring for a patient with a chest tube. Your instructor will provide a care plan form for your use.

Nursing interventions include:

- Place patient in semi-Fowler position or other position designated by physician
- Provide humidified oxygen
- Have patient turn, cough, and deep breathe
- Encourage patient to ambulate as ordered
- Splint chest to cough
- Encourage fluids and diet as tolerated
- Provide convenient tissue disposal
- Provide sputum cup
- Give oral care
- Administer analgesics as ordered
- Observe drainage system
  - — Color
  - — Amount
  - — Rise and fall in the bottles

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

ASSIGNMENT SHEET 3 — APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

Name ______________________________ Score ________

OBJECTIVE 7 **Develop a teaching plan for a patient with COPD.**

INTRODUCTION

Treatment for COPD is difficult and focuses on both palliative and preventative aspects. The disease is progressive and not curable. Patients are treated symptomatically, nurses should be able to give informed advice and supportive care. Teaching is another important element in the nurse's responsibility.

DIRECTIONS

Use a medical-surgical text and the information about a patient from your clinical practice or the patient from Assignment Sheets 1 and 2 to complete your plan of care.

- Nursing measures:
  - — Diet as tolerated and force fluids
  - — Nebulizer sprays
  - — Encourage deep breathing and coughing
  - — Supportive care and daily progress
  - — Activity level, ambulation as tolerated
  - — Medications as ordered
- Preventative measures:
  - — Postural drainage
  - — Humidified oxygen
  - — Vaporizer for humidity
  - — Avoid smoking
  - — Avoid infectious situations

1. What will you do to prepare the patient for the teaching session?

Reading Comprehension
- Gain factual information

Language
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

2. What materials, supplies, or equipment will you need?

3. Outline the teaching plan below:

Nursing measures

Preventative measures

ASSIGNMENT SHEET 4

APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

X

Name ______________________________ Score ________

OBJECTIVE 8

Develop a plan of care for a patient experiencing chest trauma or surgery.

INTRODUCTION

Patients who have had chest trauma or surgery may have difficulty breathing because of pain. Pain relief is an important part of care for these patients — they must be able to breathe deeply and cough to help avoid complications.

Conservative treatment consists of an elastic bandage to alleviate pain, analgesics to relieve pain, and deep breathing to avoid complications.

DIRECTIONS

Use a medical-surgical text and the information about a patient in your clinical practice or the patient from Assignment Sheets 1, 2 and 3 to complete a plan of care. Your instructor will provide a care plan form for your use.

Surgical treatment involves:

- Maintain an airway
- Maintain appropriate position
- Administer oxygen as ordered at 1-2 l/m
- Suction as ordered
- Turn, cough, and deep breathe q2h
- Splint to support the chest when patient coughs
- Monitor vital signs q2h
- Record intake/output q2h
- Check drainage system q2h
- Change dressings as needed
- Check chest tubes q2h
- Observe for signs of complications which could result in shock and atelectasis:
  - — Difficulty breathing
  - — Cyanosis
  - — Chest pain
  - — Weak, rapid pulse
  - — Hypotension

Reading Comprehension
- Gain factual information

Language
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

X

ASSIGNMENT SHEET 1

Care plan should meet the following criteria:

- Nursing process followed
    - Assessment
    - Analysis (under direction of RN)
    - Planning
    - Implementation
    - Outcome/evaluation (under direction of RN)
- Problem stated appropriately
- Nursing actions/interventions include discharge planning

ASSIGNMENT SHEET 2

Care plan should meet the following criteria:

- Nursing process followed
    - Assessment
    - Analysis (under direction of RN)
    - Planning
    - Implementation
    - Outcome/evaluation (under direction of RN)
- Problem stated appropriately
- Nursing actions/interventions include discharge planning
- Do a complete assessment

Check that students include the following:

- Place patient in semi-Fowler position or other position designated by physician
- Provide humidified oxygen
- Have patient turn, cough, and deep breathe
- Encourage patient to ambulate as ordered
- Splint chest to cough
- Encourage fluids and diet as tolerated
- Provide convenient tissue disposal
- Provide sputum cup
- Give oral care
- Administer analgesics as ordered

- Observe drainage system
  - Color
  - Amount
  - Rise and fall in the bottles

ASSIGNMENT SHEET 3

1. The nurse should consider the following factors:
   - Are there any distractions in the room?
   - Does the patient need glasses?
   - Does the patient feel uncomfortable or need to use the bathroom?
   - Is there sufficient lighting?
   - What is the patient's level of education?
2. Medical-surgical text or other printed information about the disease in case the patient has questions, pencil and paper for patient to make notes.
3. Check that students include the following:
   - Nursing measures:
     - Diet as tolerated and force fluids
     - Nebulizer sprays
     - Encourage deep breathing and coughing
     - Supportive care and daily progress
     - Activity level, ambulation as tolerated
     - Medications as ordered
   - Preventative measures:
     - Postural drainage
     - Humidified oxygen
     - Vaporizer for humidity
     - Avoid smoking
     - Avoid infectious situations

ASSIGNMENT SHEET 4

Check that the students include the following:

- Maintain an airway
- Maintain appropriate position
- Administer oxygen as ordered at 1-2 l/m
- Suction as ordered
- Turn, cough, and deep breathe q2h
- Splint to support the chest when patient coughs
- Monitor vital signs q2h
- Record intake/output q2h
- Check drainage system q2h
- Change dressings as needed

- Check chest tubes q2h
- Observe for signs of complications which could result in shock and atelectasis:
  - Difficulty breathing
  - Cyanosis
  - Chest pain
  - Weak, rapid pulse
  - Hypotension

JOB SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

X

Name ______________________________ Score ________

OBJECTIVE 9

Perform a respiratory assessment.

INTRODUCTION

Failure to ventilate adequately results in an insufficient supply of oxygen to meet the body's needs. There are four criteria to measure when assessing respirations. The *rate* reflects the number of cycles per minute. The *rhythm* is the regularity of the cycles. The *depth* is the volume of air inhaled with each respiration. The *sound* is the audible deviation from normal, heard with each cycle. Types of breath sounds are: *stertor*, a snoring sound from accumulated secretions in the trachea; *stridor*, inspiratory crowing sound from airway obstruction; *rhonchi* (wheezing), from partial airway obstruction; and *expiratory grunt*, from partial airway obstruction.

EQUIPMENT AND SUPPLIES

- Watch with a second hand
- Stethoscope

PROCEDURE

Assessment	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning and analysis		
1. Reassure patient and explain procedure as each step is completed.	_____	_____
2. Prepare for procedure.	_____	_____

Language
- Use standard grammar, spelling, and capitalization

Functional Writing
- Complete forms and records

General Science
- Use scientific instruments

Interactive Communications
- Communicate with clients/customers/patients

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General Relating
- Interact with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

Implementation	Yes	No
1. Collect equipment.	____	____
2. Explain procedure to the patient.	____	____
3. Wash your hands.	____	____
4. Look at your watch and note the position of the second hand.	____	____
5. Begin counting the cycles by observing the rise and fall of the patient's chest as you check your watch every few seconds.	____	____
6. When the 60 seconds have passed, stop counting and make a note of the patient's respirations.	____	____
7. Observe the depth by the chest movement.	____	____
8. Put the stethoscope on the chest and listen for the sound and rhythm.	____	____
9. Observe the patient for any abnormality or change.	____	____

- — Nasal flaring
- — Color
- — Level of consciousness
- — Restlessness
- — Posture
- — Pursed-lip breathing
- — Chest movements that are not equal and bilateral

NOTE: Respirations that are between 8 and 40 are considered normal.

10. Ask if the patient has experienced any difficulty in breathing.	____	____
11. Clean up: Wash your hands	____	____
12. Document procedure according to agency requirements	____	____

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Evaluation	Yes	No
1. Recheck patient in 30 minutes for comfort.	_____	_____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Followed doctor's orders	4	3	2	1
Performed procedure correctly	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Used universal precautions	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

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EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

EVALUATION KEY

3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required

2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill

1 **Unskilled** – Is familiar with process, but is unable to perform job

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JOB SHEET 2 — APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM — X

Name ______________________________ Score ________

OBJECTIVE 10

Perform basic tracheostomy care.

INTRODUCTION

A tracheostomy is a surgical procedure which involves creating an opening into the trachea. Using a cuffed tracheostomy tube maintains a patent airway, and prevents aspiration of food or secretions. A tracheostomy may be temporary or permanent, and may be needed when the airway is obstructed due to edema or a foreign object, or when the patient is unconscious and cannot ventilate properly or cough productively. Equipment and supplies needed for tracheostomy care are often included in a kit.

EQUIPMENT AND SUPPLIES

- Two small basins
- 4x4 all-gauze dressings
- Suture scissors
- Small-bristle brush
- Pipe cleaners
- Cotton twill tape
- Hemostat
- Cleansing solution
- Rinsing solution
- Disposable bag
- Sterile gloves

NOTE: A tracheal dilator should always be kept by the bedside of a patient with a tracheostomy.

PROCEDURE

Language
- Use standard grammar, spelling, and capitalization

Functional Writing
- Complete forms and records

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure as each step is completed.	_____	_____

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General Science
- Use scientific instruments

Interactive Communications
- Investigate/apply principles of anatomy/physiology

General Relating
- Interact with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
NOTE: Label each basin as cleaning or rinsing solution.		
2. Explain procedure to the patient.	_____	_____
3. Wash your hands.	_____	_____
4. Place patient in semi-Fowler's position.	_____	_____
5. Open tracheostomy kit.	_____	_____
6. Put on one glove.	_____	_____
7. Pour solutions into two basins.	_____	_____
8. Use ungloved hand to open other equipment and set out on sterile area. Do not touch sterile equipment.	_____	_____
9. Put on other glove.	_____	_____
10. Remove inner cannula; place in cleaning solution if it is not disposable.	_____	_____
NOTE: Turn the lock up with the finger to remove the inner cannula for cleaning.		
11. Inspect inner cannula for mucous.	_____	_____
12. Rinse inner cannula in basin with rinsing solution and dry.	_____	_____
NOTE: Suction takes place at this time if needed.		

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	Yes	No
13. Secure inner cannula in place.	____	____
NOTE: The inner cannula fits snugly into the outer cannula. Turning the lock down keeps the inner cannula securely in place. Always lock the inner cannula firmly in place.		
14. Cleanse around stoma with prescribed solutions; dry carefully.	____	____
15. Apply new dressing and change tapes, knotting securely to hold outer tube in place.	____	____
NOTE: Place folded gauze 4x4s around the tube to catch secretions. These dressings are changed by the nurse as often as necessary.		
16. Remove gloves.	____	____
17. Clean up:		
a. Clean reusable equipment.	____	____
b. Properly discard disposable equipment.	____	____
c. Wash your hands.	____	____
18. Document procedure according to agency requirements.	____	____
Evaluation		
1. Recheck patient in 30 minutes for comfort.	____	____

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(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Followed doctor's orders	4	3	2	1
Performed procedure correctly	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Used universal precautions	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

BEST COPY AVAILABLE

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

EVALUATION KEY

3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
1 **Unskilled** – Is familiar with process, but is unable to perform job

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JOB
SHEET 3

APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

X

Name ______________________________ Score ________

OBJECTIVE 11

Perform endotracheal suctioning.

INTRODUCTION

Suctioning is removing secretions from the trachea of a patient with a tracheostomy. A suction catheter is inserted into the endotracheal tube. This procedure helps to prevent respiratory complications by maintaining a patent airway which allows the patient to breathe normally. The pressure used for suction varies, but the lowest effective pressure should be used. For adults, the pressure is usually 80-100 mm Hg.

EQUIPMENT AND SUPPLIES

- Suctioning machine
- Disposable connecting tube
- Disposable catheter and glove pack
- Sterile gauze squares
- Disposable bag
- Sterile saline
- Sterile rinsing container
- Tissues
- Emesis basin
- Towel
- Rubber bands

PROCEDURE

Language
- Use standard grammar, spelling, and capitalization

Functional Writing
- Complete forms and records

General Science
- Use scientific instruments

Life Science
- Investigate/apply principles of anatomy/physiology

Assessment and analysis	Yes	No
1. Check physician's orders.	____	____
2. Identify patient.	____	____
3. Observe patient's condition; chart any changes.	____	____
Planning		
1. Reassure patient and explain procedure as each step is completed.	____	____
2. Prepare for procedure.	____	____

BEST COPY AVAILABLE

Interactive Communications
- Communicate with clients/customers/patients

General Relating
- Interact with clients/customers/patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

Implementation	Yes	No
1. Collect equipment.		
2. Explain procedure to the patient.		
3. Wash your hands.		
4. Connect suction adapter to suction machine.		
5. Place patient in semi-Fowler's position.		
6. Place towel over patient's chest.		
7. Have emesis basin and tissues ready for patient to use.		
8. Open sterile catheter and glove packet on bedside table, maintaining a sterile field.		
9. Open one packet of gauze squares.		
10. Open sterile rinsing container and fill with normal saline.		
11. Open sterile connecting tube pack and connect tube to suction outlet, placing end to be connected to sterile catheter on sterile field.		
12. Put sterile glove on dominant hand.		
13. Hold sterile catheter in gloved hand pick up suction tube with ungloved hand; attach it by pushing and twisting gently.		
14. Use ungloved hand to turn on suction.		
15. Dip end of catheter into sterile saline.		

BEST COPY AVAILABLE

Yes No

16. Turn patient's head to the side and slightly extend patient's neck. _____ _____

⚠ **CAUTION:** Tissue damage possible. Do not use suction during insertion.

---

17. Introduce catheter through tract opening and insert to a depth of 3 inches or until you feel resistance. _____ _____

⚠ **WARNING:** Asphyxiation possible. Do not suction for more than 15 seconds.

---

18. With gloved hand, occlude lumen of sterile catheter to apply suction. While applying suction, rotate and remove the catheter. _____ _____

    NOTE: The occlusion process depends on the type of catheter used to occlude the lumen.

19. Rinse suction pressure tube by occluding and releasing lumen as necessary. _____ _____

20. Rinse catheter by dipping end into basin of sterile saline and by intermittently applying pressure. _____ _____

21. Allow patient to cough and expectorate mucous. _____ _____

22. Turn off suction machine with ungloved hand. _____ _____

23. Disconnect catheter from connecting tubing. _____ _____

24. Remove glove by pulling off over catheter and discard. _____ _____

25. Cover end of connecting tube with a sterile gauze square; secure square with a rubber band. _____ _____

BEST COPY AVAILABLE

	Yes	No
26. Clean up:		
a. Clean reusable equipment.	____	____
b. Properly discard disposable equipment.	____	____
c. Wash your hands.	____	____
27. Document procedure according to agency requirements.	____	____

PROCEDURE

Evaluation

1. Recheck patient in 30 minutes for comfort.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Followed doctor's orders	4	3	2	1
Performed procedure correctly	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1

BEST COPY AVAILABLE

Practiced safety rules throughout procedure	4	3	2	1
Used universal precautions	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

EVALUATION KEY

3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required

2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill

1 **Unskilled** – Is familiar with process, but is unable to perform job

BEST COPY AVAILABLE

JOB SHEET 4

APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

X

Name ______________________________ Score ________

OBJECTIVE 12

Care for a patient with a chest tube.

Use an actual case or the scenario in Assignment Sheet 2.

INTRODUCTION

Chest tubes allow air or fluid to drain from the pleural cavity. The insertion site depends on the patient's condition. The tubes are connected to an underwater sealed system which provides for drainage and lung expansion. Some agencies use glass bottles to collect drainage, but many use commercial sealed systems. The complex equipment and specialized treatment can frighten patients with chest tubes. Attitude is important to the patient's improvement. A nurse who is competent in handling the equipment can convey self-confidence, which in turn is reassuring to the patient. The nurse who is observant can help to prevent complications. Any sudden increase in chest pain should be reported immediately. Careful monitoring and measuring of the system is important in caring for the patient with a chest tube. The nurse must record the level of drainage without disturbing the system.

EQUIPMENT AND SUPPLIES

- White adhesive tape
- Gloves
- Pen

PROCEDURE

Language
- Use standard grammar, spelling, and capitalization

Functional Writing
- Complete forms and records

General Science
- Use scientific instruments

Life Science
- Investigate/apply principles of anatomy/physiology

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure as each step is completed.	_____	_____
2. Prepare for procedure.	_____	_____

BEST COPY AVAILABLE

Interactive Communications
- Communicate with clients/customers/ patients

General Relating
- Interact with clients/customers/ patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

Implementation	Yes	No
1. Collect equipment.	____	____
2. Explain procedure to the patient as each step is performed.	____	____
3. Wash your hands.	____	____
4. Put on gloves. -	____	____
5. Check patient's dressings.	____	____
6. Observe for swelling and drainage.	____	____

⚠ **CAUTION:** Do not open the system.

---

7. Check to determine whether there are any breaks in the closed system.	____	____
8. Make sure that all connections of stoppers and tubing are taped.	____	____
9. If using a bottle system, check that a clamp is kept at bedside to prevent air from entering the cavity if a break occurs in the system.	____	____
10. Make sure that the bottle with chest drainage is never raised from floor level while still connected to patient.	____	____
11. Make sure that bottles are labeled properly if two chest catheters and two bottles are used.	____	____
12. Make sure that the bottle with tubing leading to patient has enough water to cover tube.	____	____
13. Check to see whether drainage fluctuates in the tubing as inspiration and expiration occur.	____	____

NOTE: Bubbling in the tubing occasionally occurs if the system is working properly. In some of the newer systems, bubbling is a sign that the system is malfunctioning. Be familiar with the type of equipment used in your facility.

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	Yes	No
14. Milk drainage tube from patient to drainage bottle if clogging is suspected and the procedure is allowed.	____	____
15. Place a petroleum gauze square over insertion site immediately if chest tube slips out.	____	____
16. Reassure patient that system is working properly.	____	____
17. Place a piece of tape at the top of the drainage level and mark the time the level is read every 8 hours.	____	____
18. Observe amount and appearance of all drainage every 8 hours.	____	____
19. Clean up: Wash your hands.	____	____
20. Document procedure according to agency requirements.	____	____

PROCEDURE

Evaluation

	Yes	No
21. Recheck patient in 30 minutes for comfort.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

____

____

____

BEST COPY AVAILABLE

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

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Performed procedure correctly	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Used universal precautions	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

EVALUATION KEY

3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required
2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill
1 **Unskilled** – Is familiar with process, but is unable to perform job

BEST COPY AVAILABLE

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

X

Name ______________________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the respiratory system to their correct definitions. Write the correct letter in the blank.

Part 1

_____ 1. Loss of consciousness or fainting related to lack of normal blood supply to the brain

_____ 2. Profuse perspiration

_____ 3. Fluid containing pus

_____ 4. Obstruction of nasal passages due to irregularities in the bone and cartilage

_____ 5. Insufficient oxygenation of the blood

_____ 6. Expectoration of blood from the oral cavity, larynx, or lungs

_____ 7. Slight blue-gray discoloration of skin

_____ 8. Obstruction of nasal passages due to swelling and growth of adenoids

_____ 9. Excess carbon dioxide in the blood

_____ 10. The formation of pus pockets

a. archititis
b. bleb
c. cyanosis
d. deviated septum
e. diaphoresis
f. dyspnea
g. exenteration
h. exudate
i. hemoptysis
j. hypertrophied adenoids
k. hypercapnia
l. hypoxemia
m. laryngitis
n rhinitis
o. suppuration
p. syncope

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Part 2

_____ 1. Curvature of the nails and soft tissue enlargement of the fingers and toes; seen with chronic respiratory diseases

_____ 2. Grape-like swellings that may be caused by chronic irritation

_____ 3. Syndrome with varying degrees of disturbances of oxygen to the body

_____ 4. A blood clot that attaches to the wall of a blood vessel and blocks the lumen

_____ 5. Grating sound heard on auscultation

_____ 6. Watery nasal discharge

_____ 7. A mass of foreign material or air bubble circulating in the bloodstream

a. architis

b. clubbing

c. cyanosis

d. deviated septum

e. diaphoresis

f. embolus

g. exenteration

h. friction rub

i. hemoptysis

j. hypertrophied adenoids

k. hypercapnia

l. hypoxemia

m. polyps

n rhinorrhea

o. shock

p sputum

q. thrombus

OBJECTIVE 2

Choose the correct word or phrase to complete statements about diseases and disorders of the upper respiratory tract. Write the correct letter in the blank.

_____ 1. One preventable cause of rhinitis is

a. bacterial infections
b. exposure to cold
c. lack of vitamin C
d. overuse of nose drops

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______ 2. Signs and symptoms of rhinitis include

a. anorexia or nausea
b. edema of orbital area
c. itching of eyes and nose
d. severe headache

______ 3. The teaching plan for a patient with rhinitis should include

a. cautioning the patient not to blow nose too hard or too frequently
b. cautioning the patient not to use vasoconstricting drops or sprays
c. cautioning the patient to avoid exposure to irritants
d. instructing the patient to avoid blowing the nose for 48 hours after removal of nasal packing

______ 4. Signs and symptoms of sinusitis include

a. cough
b. fever and chills
c. severe headache
d. watery eyes

______ 5. Causes of sinusitis include

a. exposure to irritants
b. malignancy
c. obstruction
d. upper respiratory infection

______ 6. Health care management for a patient with sinusitis includes

a. hot, moist compresses
b. ice packs
c. throat rinses or gargles
d. voice rest

______ 7. Patients with sinusitis should be warned against

a. blowing the nose or wearing dentures before surgery
b. removing nasal packing
c. driving or operating machinery when using antihistamines
d. using nasal drops or sprays

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_____ 8. Symptoms of pharyngitis include

a. difficulty swallowing
b. productive cough
c. severe headache
d. watery nasal discharge

_____ 9. Symptoms of strep throat in adults include

a. abdominal pain
b. blood-tinged sputum
c. nausea and vomiting
d. rapid onset of throat pain

_____ 10. Laryngitis may be caused by

a. external irritants
b. lack of vitamin C
c. obstructions
d. polyps

_____ 11. Signs and symptoms of laryngitis include

a. difficulty swallowing
b. husky voice
c. malaise
d. throat edema

_____ 12. Signs and symptoms of obstructions of the breathing passages include

a. dry cough
b. noisy breathing
c. severe headache
d. polyps

_____ 13. Patients who have nasal surgery to remove obstructions should avoid blowing the nose for _____________ after removal of nasal packing

a. 1 hour
b. 24 hours
c. 48 hours
d. 76 hours

May be photocopied for student use

_____ 14. Signs and symptoms of tonsillitis include

a. dry cough
b. dyspnea
c. sore throat
d. wheezing

_____ 15. When planning for the discharge of a patient who has had surgery for tonsillitis, your teaching plan should include

a. avoid clearing throat for 1-2 weeks postoperative
b. avoid coughing for 24 hours postoperative
c. avoid strenuous exercise for 3-4 weeks postoperative
d. avoid vigorous nose blowing for 48 hours postoperative

_____ 16. The most common malignancy of the upper respiratory tract is squamous cell carcinoma of the

a. larynx
b. nose
c. sinus
d. tonsil

_____ 17. Signs and symptoms of sinus carcinoma include

a. earache
b. edema
c. loosening of upper teeth
d. palpable lump

_____ 18. Signs and symptoms of nasopharyngeal carcinoma include

a. exudate from nose
b. eye displacement
c. loosening of upper teeth
d. nosebleeds

_____ 19. Signs and symptoms of laryngeal cancer include

a. earache
b. hoarseness
c. nosebleeds
d. ulceration

May be photocopied for student use.

Mary Sue Collier is a 28-year-old chemical engineer who was admitted to the hospital today with sinusitis. She has been to the doctor several times with her problem, but he has not been able to relieve her symptoms. She tells you she is frustrated because she has not felt well for several weeks.

Questions 20-23 apply to the above situation.

_____ 20. When you do your assessment, you will probably note symptoms of

a. noisy respirations, throat irritation, mouth breathing
b. swollen tonsils, pus on the mucous membranes, hoarseness
c. sore throat, anorexia, difficulty swallowing
d. malaise, severe headache, loss of sense of smell

_____ 21. The care plan for Ms. Collier will include

a. encourage voice rest
b. instruct patient to contact physician at first signs of infection
c. recommend ice-cold foods for the first 48 hours postoperative
d. warn against using oral decongestants

_____ 22. Medications you will give Ms. Collier include

a. analgesics
b. antipyretics
c. bronchodilators
d. corticosteroids

_____ 23. One important item in the implementation of her care would be

a. oxygen
b. increased fluid intake
c. vitamins
d. cool compresses

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OBJECTIVE 3

Choose the correct word or phrase to complete statements about diseases and disorders of the lower respiratory tract. Write the correct letter in the blank.

_____ 1. Medications for a patient with influenza include

a. antibiotics
b. antipyretics
c. corticosteroids
d. cough suppressants

_____ 2. Signs and symptoms of influenza include

a. anorexia
b. dyspnea
c. rhinorrhea
d. syncope

_____ 3. Influenza is defined as a

a. chronic upper respiratory infection
b. common, acute respiratory infection
c. common, chronic respiratory inflammation
d. common upper respiratory infection

_____ 4. The teaching plan for a patient with influenza includes encouraging the use of

a. antitussives
b. bronchodilators
c. high-protein diet
d. steam or cool mist vaporizer

_____ 5. Bronchitis is often secondary to

a. asthma
b. exposure to external irritants
c. pulmonary disease
d. upper respiratory infections

_____ 6. Causes of bronchitis include

a. aspiration of foreign material
b. external irritants
c. obstruction
d. pulmonary embolism

May be photocopied for student use

______ 7. Signs and symptoms of bronchitis include

a. foul, greenish-yellow sputum
b. high fever
c. pain and tightness in chest
d. sweating

______ 8. The teaching plan for patients with bronchitis should include

a. discuss avoidance of precipitating factors
b. stress that patient must continue taking medications until course is finished
c. teach hygiene methods to prevent spread of infection
d. teach patient use and dosage of inhaled medications

______ 9. Bronchiectasis is defined as

a. destruction of the alveolar sacs that results in chronic dilation of the alveoli
b. destruction of the bronchial walls that results in chronic dilation of the bronchi and bronchioles
c. inflammation of the mucous membranes of the bronchial tubes
d. localized area of suppuration in the bronchioles

______ 10. Bronchiectasis may be caused by

a. aspiration of foreign material
b. complication of thoracic surgery
c. obstruction
d. pulmonary disease

______ 11. Health care management for patients with bronchiectasis includes

a. decongestants
b. frequent small meals
c. postural drainage
d. thoracentesis

May be photocopied for student use.

_______ 12. Signs and symptoms of bronchiectasis include

a. dry cough
b. hemoptysis
c. high fever
d. stabbing chest pain

_______ 13. The teaching plan for patients with bronchiectasis should include

a. instruct patient to use steam or cool mist vaporizer
b. teach hygiene methods to prevent spread of infection
c. teach patient to care for tracheostomy
d. stress the need to avoid people with upper respiratory infections

_______ 14. A lung abscess is defined as

a. extensive sloughing of necrotic lung tissue
b. inflamed area of lung tissue
c. localized area of suppuration
d. formation of pus in the pleural space

_______ 15. Lung abscesses may be caused by

a. aspiration of foreign body or material
b. complication of thoracic surgery
c. congestive heart failure
d. kidney disease

_______ 16. Health care management for patients with lung abscesses include

a. intercostal block
b. chest drainage
c. prevent infection
d. thoracentesis

_______ 17. Signs and symptoms of a lung abscess include

a. anorexia
b. flaring of nares
c. purulent or bloody sputum
d. sweating

May be photocopied for student use.

_____ 18. When promoting healing for a patient with a lung abscess, you should

a. assist with allergy testing
b. assist with intercostal block for pain relief
c. use steam or cool mist vaporizer
d. provide meals high in calories and protein

_____ 19. Empyema is defined as

a. accumulation of fluid in the pleural space
b. inflamed area of lung tissue
c. localized area of suppuration
d. formation of pus in the pleural space

_____ 20. Causes of empyema include

a. aspiration of foreign body or material
b. complication of thoracic surgery
c. congestive heart failure
d. kidney disease

_____ 21. Health care management for patients with empyema includes

a. pneumonectomy and chest drainage
b. postural drainage and percussion
c. removal of fluid through tube drainage, open drainage, or thoracentesis
d. segmental resection

_____ 22. Signs and symptoms of empyema include

a. anorexia and weight loss
b. anxiety and flaring of nares
c. diaphoresis
d. purulent or blood-tinged sputum

_____ 23. Pleural effusion is defined as

a. accumulation of fluid in the pleural space
b. inflammation of the lung
c. localized area of suppuration
d. formation of pus in the pleural space

May be photocopied for student use.

_____ 24. Pleural effusion may be caused by

a. cancer
b. exposure to irritants
c. familial tendency
d. smoking

_____ 25. Signs and symptoms of pleural effusion include

a. anorexia and weight loss
b. anxiety and flaring of nares
c. diaphoresis
d. purulent or blood-tinged sputum

_____ 26. Causes of lung cancer include

a. obstructions
b. pulmonary disease
c. smoking
d. trauma

_____ 27. Health care management for patients with lung cancer includes

a. bronchodilators
b. percussion and postural drainage
c. symptomatic relief
d. thoracentesis

_____ 28. Signs and symptoms of lung cancer include

a. cyanotic nailbeds and lips
b. diaphoresis
c. fever and chills
d. productive cough with blood-streaked sputum

_____ 29. The teaching plan for patients with lung cancer should include

a. advise patient to increase fluid intake
b. emphasize the need to stay healthy
c. teach coughing techniques
d. teach use of inhaled medication

May be photocopied for student use.

______ 30. Pneumonia is defined as

a. accumulation of fluid in the pleural space
b. inflammation of the lung
c. localized area of suppuration
d. formation of pus in the pleural space

______ 31. Causes of pneumonia include

a. aspiration of foreign substances
b. exposure to cold
c. allergies
d. smoking

______ 32. Health care management for patients with pneumonia includes

a. intercostal block
b. percussion and postural drainage
c. symptomatic relief
d. thoracentesis

______ 33. Signs and symptoms of pneumonia include

a. anorexia and weight loss
b. dyspnea
c. foul, yellow-green sputum
d. stabbing chest pain

______ 34. The teaching plan for patients with pneumonia should include

a. advise patient to increase fluid intake
b. instruct patient on postural drainage techniques
c. teach hygiene practices to prevent spread of infection
d. teach use of inhaled medications

______ 35. Bronchial asthma is defined as shortness of breath and wheezing caused by

a. abscesses in the alveoli
b. fluid in the pleural space
c. inflammation of the bronchioles
d. spasms of the bronchial tubes

May be photocopied for student use

______ 36. Trigger factors for bronchial asthma include

a. lack of oxygen
b. poor nutrition
c. response to drugs or toxins
d. trauma

______ 37. Health care management for patients with bronchial asthma includes

a. analgesics
b. avoid causative factors
c. prevent spread of infection
d. thoracotomy

______ 38. Symptoms of bronchial asthma include

a. anorexia
b. fever and chills
c. productive cough
d. wheezing

______ 39. When promoting healing for the patient with bronchial asthma, you should

a. encourage exercise
b. provide small, frequent, high-protein meals
c. provide steam or cool mist vaporizer
d. splint patient to aid coughing

______ 40. Pleurisy is an inflammation of the pleura that may be caused by

a. exposure to allergens
b. smoking
c. thoracic surgery
d. viral or bacterial infection

______ 41. Health care management for the patient with pleurisy includes

a. chest drainage using chest tubes or thoracentesis
b. intercostal block
c. position patient on unaffected side
d. prevent spread of infection

May be photocopied for student use.

_____ 42. Signs and symptoms of pleurisy include

a. barrel chest
b. productive cough
c. sharp pain on inspiration
d. weight loss

_____ 43. When promoting healing for the patient with pleurisy, you should

a. assist with allergy testing
b. assist with drainage and suctioning
c. provide isolation in early stages
d. splint patient to aid coughing

_____ 44. Risk factors for contracting pulmonary tuberculosis include

a. chronic illness
b. familial tendency
c. occupational exposure to irritants
d. smoking

_____ 45. Health care management for the patient with tuberculosis includes

a. eliminate exposure to irritants
b. postural drainage
c. prevent spread of infection
d. radiation therapy

_____ 46. Early signs and symptoms of pulmonary tuberculosis include

a. chest pain
b. dry cough
c. exertional dyspnea
d. night sweats

_____ 47. Advanced symptoms of pulmonary tuberculosis include

a. dyspnea
b. hemoptysis
c. high fever
d. rapid pulse

May be photocopied for student use

_______ 48. The teaching plan for patients with pulmonary tuberculosis should include

a. encourage patient to use steam or cool mist vaporizer
b. emphasize the need to avoid irritants
c. stress the need to continue taking medication as prescribed
d. teach patient to use nebulized medication

_______ 49. Emphysema may be caused by

a. cigarette smoking
b. genetic factors
c. immobilization
d. trauma

_______ 50. Health care management for the patient with emphysema includes

a. analgesics
b. exercise
c. postural drainage
d. TED hose

_______ 51. Signs and symptoms of emphysema include

a. barrel chest
b. hemoptysis
c. night sweats
d. rapid, weak pulse

_______ 52. The teaching plan for patients with emphysema should include

a. encourage exercise
b. encourage obese patient to lose weight
c. teach effective breathing and coughing techniques
d. teach patient how and when to use TED hose

_______ 53. Pulmonary embolism is defined as

a. collapse of a lung or one lobe of a lung
b. collection of air or gas in the pleural cavity
c. destructive changes in the bronchiole walls
d. occlusion of one or more pulmonary arteries

May be photocopied for student use

_______ 54. Risk factors for pulmonary embolism include

a. emphysema
b. pregnancy or recently giving birth
c. chronic disease
d. smoking

_______ 55. Health care management for the patient with pulmonary embolism includes

a. pain relief
b. postural drainage
c. thoracentesis
d. TED hose

_______ 56. Signs and symptoms of massive pulmonary embolism include

a. cyanosis
b. exertional dyspnea
c. fever
d. sharp, sudden substernal pain

_______ 57. Pneumothorax is defined as

a. collection of air or gas in the pleural cavity
b. collection of fluid in the pleural cavity
c. collection of pus in the pleural cavity
d. inflammation of the pleural cavity

_______ 58. Immediate care for a pneumothorax consists of

a. administer oxygen
b. cardiopulmonary resuscitation
c. pressure and bandage over area
d. thoracentesis or thoracotomy

_______ 59. Signs and symptoms of a pneumothorax include

a. anxiety
b. feeling of suffocation
b. productive cough with pink-tinged sputum
d. sudden, sharp pain in chest

May be photocopied for student use

_____ 60. The teaching plan for patients with pulmonary embolism or pneumothorax should include

a. encourage patient to eat frequent small meals
b. discuss symptoms that should be reported to physician
c. instruct patient to use steam or cool mist vaporizer
d. teach patient to use nebulized medication

OBJECTIVE 4

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the respiratory tract. Write the correct letter in the blank.

_____ 1. What effect does cystic fibrosis have on the pulmonary system?

a. fluid collects in the pleural space
b. purulent exudate accumulates in the alveoli
c. spasms of the larynx or bronchioles
d. thick mucous occludes the bronchioles and bronchi

_____ 2. Health care management for patients with cystic fibrosis includes

a. avoid trigger factors
b. intubation
c. postural drainage and percussion
d. provide stress-free environment

_____ 3. Signs and symptoms of cystic fibrosis include

a. anorexia and weight loss
b. exertional fatigue and wheezing
c. stridor on inspiration
d. tightness in chest

_____ 4. The teaching plan for patients with cystic fibrosis should include

a. emphasize the need to avoid factors that trigger attacks
b. teach patient to use inhaler
c. train parents to perform postural drainage
d. warn against using cough syrups

May be photocopied for student use.

______ 5. Asthma is characterized by

a. bronchial spasms
b. decreased mucous production
c. inflammation of the epiglottis
d. laryngeal spasms

______ 6. Health care management for the patient with asthma includes

a. avoid upsetting child
b. infection prevention
c. maintain airway during attacks
d. reduce spasms

______ 7. Signs and symptoms of asthma include

a. barking cough
b. drooling
c. low grade fever
d. retractions

______ 8. The teaching plan for patients with asthma should include

a. advise against using over-the-counter medications
b. emphasize the need to eliminate all allergens
c. instruct parents to use steam from vaporizer or shower to treat attacks
d. teach parents to perform postural drainage and percussion

______ 9. Croup usually affects children under the age of

a. 6 months
b. 1 year
c. 3 years
d. 5 years

______ 10. Health care management for patients with croup includes

a. avoid exposure to allergens
b. increased fluid intake
c. maintain airway during attacks
d. teach effective breathing techniques

May be photocopied for student use

_____ 11. Signs and symptoms of croup include

a. barking cough
b. drooling
c. inability to swallow
d. retractions

_____ 12. The teaching plan for patients with croup should include

a. encourage parent to offer fluids the child likes, such as fruit juice or chocolate milk
b. emphasize the need to eliminate all allergens
c. teach parents to care for tracheostomy
d. teach parents to use steam from shower or vaporizer to treat croup attacks

_____ 13. Epiglottitis is an acute inflammation of the epiglottis and supraglottic tissues that may follow a(n)

a. asthma attack
b. cold
c. croup attack
d. high fever

_____ 14. Health care management for the patient with epiglottitis includes

a. avoid upsetting the child
b. bed rest
c. encourage increased fluid intake
d. teach effective breathing techniques

_____ 15. Signs and symptoms of epiglottitis include

a. cyanosis of lips and nails
b. productive cough
c. stridor and drooling
d. vomiting

NOTICE: Objectives 5 through 12 are evaluated on the Job Sheets/Assignment Sheets in this unit. If you have not completed these activities, check with your instructor.

May be photocopied for student use.

WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

X

OBJECTIVE 1

Part 1				Part 2			
1.	p	6.	i	1.	b	6.	n
2	e	7.	c	2.	m	7.	f
3.	h	8.	j	3.	o		
4.	d	9.	k	4.	q		
5.	l	10.	o	5.	h		

OBJECTIVE 2

1.	d	7.	c	13.	c	19.	b
2.	c	8.	a	14.	c	20.	d
3.	a	9.	d	15.	a	21.	b
4.	c	10.	a	16.	a	22.	a
5.	d	11.	b	17.	c	23.	b
6.	a	12.	b	18.	d		

OBJECTIVE 3

1.	b	11.	c	21.	c	31.	a
2.	c	12.	b	22.	b	32.	b
3.	b	13.	d	23.	a	33.	d
4.	d	14.	c	24.	a	34.	c
5.	d	15.	a	25.	b	35.	d
6.	b	16.	b	26.	c	36.	c
7.	c	17.	c	27.	c	37.	b
8.	a	18.	d	28.	d	38.	d
9.	b	19.	d	29.	c	39.	c
10.	a	20.	b	30.	b	40.	d
41.	b	51.	a				
42.	c	52.	c				
43.	d	53.	d				
44.	a	54.	b				
45.	c	55.	d				
46.	d	56.	d				
47.	b	57.	a				
48.	c	58.	c				
49.	a	59.	d				
50.	c	60.	b				

OBJECTIVE 4

1.	d	6.	c	11.	a
2.	c	7.	d	12.	d
3.	b	8.	b	13.	b
4.	c	9.	c	14.	a
5.	a	10.	b	15.	c

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM

XI

INTRODUCTION

Endocrine glands secrete hormones directly into the bloodstream, regulating the function of organs. The function of hormones is to interact with tissues chemically in the interior of cells or cell membranes. The different hormones use a specific mechanism to target their actions on tissues. The hormone concentration is maintained at a relatively constant level. If the hormone level falls, the glands will produce and secrete a specific hormone to raise the hormone concentration. The mechanism for this control is called feedback. The endocrine system includes the thyroid, parathyroid, adrenal, pituitary, and pancreas.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the endocrine system and associated nursing processes. In addition, you will demonstrate these competencies by completing Assignment Sheets, Job Sheets, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the endocrine system to their correct definitions.
2. Choose the correct word or phrase to complete statements about diseases and disorders of the thyroid and parathyroid glands.
3. Choose the correct word or phrase to complete statements about diseases and disorders of the adrenal glands.
4. Choose the correct word or phrase to complete statements about diseases and disorders of the pituitary gland.
5. Choose the correct word or phrase to complete statements about pancreatic disorders.
6. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the endocrine system.

7. Plan care for patients with diseases and disorders of the endocrine system. (Assignment Sheet 1)

8. Assess the teaching needs of a diabetic patient and develop a teaching plan based on identified needs. (Assignment Sheet 2)

9. Assist a patient to select an appropriate diet based on an exchange list. (Assignment Sheet 3)

10. Determine the insulin needs for patients on a sliding scale. (Job Sheet 1)

11. Perform finger stick for blood glucose monitoring. (Job Sheet 2)

APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objective 1, basic information that supports the rest of the unit;

  Part 2 — Objectives 2 and 3, the first two groupings, including diseases and disorders of the thyroid, parathyroid, and adrenal glands; and

  Part 3 — Objectives 4-6, the next three groupings, including diseases and disorders of the pituitary gland and pancreas and pediatric disorders.
- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a guest speaker to discuss diseases and disorders of the endocrine system.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet, and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.
- Obtain models and large pictures of the endocrine system.
- Make a poster of the endocrine system.
- Make a bulletin board showing the endocrine system.

- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration

  - Assist students to conduct a chapter service project on diseases and disorders of the endocrine system.

  - Develop objectives for service project and identify a theme.

  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.

  - Plan a community or school health project that involves disseminating pamphlets about proper care of patients with diseases and disorders of the endocrine system.

  - Develop and/or participate in a community teaching project that involves diseases and disorders of the endocrine system.

- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.

- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the endocrine system to their correct definitions.

- Discuss terms associated with the endocrine system.

- Have students play reinforcement games and work crossword puzzles using terms.

- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about diseases and disorders of the thyroid and parathyroid glands.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the thyroid and parathyroid glands.

- Have students share ideas that might be helpful in evaluating diseases of the thyroid and parathyroid glands.

- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the thyroid and parathyroid glands.
- Discuss other diseases and disorders of the thyroid and parathyroid glands not mentioned in this unit.
- Use the information in this section to complete Assignment Sheet 1.

Objective 3: Choose the correct word or phrase to complete statements about diseases and disorders of the adrenal glands.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the adrenal glands.
- Have students share ideas that might be helpful in evaluating diseases of the adrenal glands.
- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the adrenal glands.
- Discuss other diseases and disorders of the adrenal glands not mentioned in this unit.

Objective 4: Choose the correct word or phrase to complete statements about diseases and disorders of the pituitary gland.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the pituitary gland.
- Have students share ideas that might be helpful in evaluating diseases of the pituitary gland.
- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the pituitary gland.
- Discuss other diseases and disorders of the pituitary gland not mentioned in this unit.

Objective 5: Choose the correct word or phrase to complete statements about pancreatic disorders.

- Have students share relevant incidents about friends or family members who have problems related to pancreatic disorders.
- Have students share ideas that might be helpful in evaluating pancreatic disorders.

- Discuss ways in which nurses can improve the care of patients with pancreatic disorders.

- Discuss other diseases and disorders of the pancreas not mentioned in this unit.

- Use the information in this section to complete Assignment Sheets 2 and 3.

- Stress that students will use the information in this section to complete Job Sheets 1 and 2.

Objective 6: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the endocrine system.

- Have students share relevant incidents about friends or family members who have problems related to pediatric diseases and disorders of the endocrine system.

- Have students share ideas that might be helpful in evaluating pediatric diseases and disorders of the endocrine system.

- Discuss ways in which nurses can improve the care of patients with pediatric diseases and disorders of the endocrine system.

- Discuss other pediatric diseases and disorders not mentioned in this unit.

APPLICATION

- Use Assignment Sheet 1 to give students an opportunity to practice ideas that will help when they care for a patient with diseases and disorders of the endocrine system.

- Make a video or skit related to patient care of a person who has problems associated with diseases and disorders of the endocrine system. The students can do the presentation, or the teachers can entertain the students.

Objective 7: Plan care for patients with diseases and disorders of the endocrine system. (Assignment Sheet 1)

- Use Assignment Sheet 1 to give students an opportunity to practice ideas that will help when they care for a patient with diseases and disorders of the endocrine system.

- Provide a care plan form for students' use.

Objective 8: Assess the teaching needs of a diabetic patient and develop a teaching plan based on identified needs. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give students an opportunity to practice ideas that will help when they teach a patient with diabetes.

- Have students present a one-minute speech on caring for or teaching a patient with problems associated with the endocrine system.

Objective 9: Assist a patient to select an appropriate diet based on an exchange list. (Assignment Sheet 3)

- Use Assignment Sheet 3 to give students an opportunity to practice helping a diabetic patient select an appropriate diet based on an exchange list.

- Have students present a one-minute speech on teaching a patient about nutrition and diet.

Objective 10: Determine the insulin needs for patients on a sliding scale. (Job Sheet 1)

- Use the Job Sheet to give students hands-on experience in determining the insulin needs for diabetic patients on a sliding scale.

Objective 11: Perform finger stick for blood glucose monitoring. (Job Sheet 2)

- Use the Job Sheet to give students hands-on experience in performing a finger stick for blood glucose monitoring.

EVALUATION

Pretest

- Give Written Test as pretest

- Determine individual study requirements from pretest results.

- Counsel students individually on pretest results and study requirements.

- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.
- Complete appropriate sections of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.
- Give the Written Test.
- Complete appropriate sections of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.
- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *University of California Berkeley Wellness Letter*, 48 Shattuck Square, Suite 43, Berkeley, CA. 94704-1140.

UNIT REFERENCES

- Betz, Cecily Lynn and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing.* St. Louis: Mosby-Year Book, Inc., 1991.
- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.
- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.
- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing.* Philadelphia: W.B. Saunders Company, 1990.
- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.
- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C.V. Mosby Company, 1990.

INFORMATION SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM

XI

OBJECTIVE 1

Match terms associated with diseases and disorders of the endocrine system to their correct definitions.

- **amenorrhea** — Absence of menstruation
- **endocrine glands** — Organs which secrete hormones that regulate the body's activity
- **exophthalmos** — Abnormal protrusion of the eyeball
- **glucosuria** — Sugar in the urine
- **hyperpyrexia** — Elevation of the body temperature above 106° F (41° C.)
- **idiopathic** — Without a clear cause
- **insulin** — Pancreatic hormone essential for metabolizing glucose
- **ketosis** — Incomplete metabolism of fatty acids that accumulate in the body
- **menorrhagia** — Excessive menstrual bleeding
- **metabolism** — Reactions that take place in the body as a result of physical and chemical changes, such as energy use
- **nocturia** — Excessive urination at night
- **paresthesia** — Feeling of numbness, pricking, or tingling
- **pheochromocytoma** — A tumor of the adrenal system that causes oversecretion of epinephrine and norepinephrine, leading to arterial hypertension.
- **photophobia** — Inability to tolerate light
- **polydipsia** — Excessive thirst
- **polyphagia** — Eating abnormally large amounts
- **polyuria** — Excessive urination

- **psychosis** — Mental disorder in which patients lose contact with reality
- **tetany** — Intermittent tonic muscle spasms
- **virilism** — Presence or development of male secondary characteristics in a woman

OBJECTIVE 2

Choose the correct word or phrase to complete statements about diseases and disorders of the thyroid and parathyroid glands.

Description and etiology

Hypothyroidism — Deficient secretion of thyroid hormones, resulting in a lower metabolic rate. Severe hypothyroidism is known as *myxedema*.

Causes

- Treatment of hyperthyroidism
- Diseased or damaged thyroid gland
- Failure of pituitary gland to secrete TSH

Health care management

- Symptomatic relief
- Lifelong hormone replacement
- Diet containing fruits, vegetables, and adequate iodine intake
- Prevent chilling
- Medications: natural or synthetic thyroid
- Complications: angina, hypotension, bradycardia, hypothermia, convulsions

ASSESSMENT

Signs and symptoms

Hypothyroidism

- Early:
  - Fatigue
  - Alopecia
  - Brittle nails
  - Numbness and tingling of fingers
  - Menstrual irregularities
  - Loss of libido
- Late:
  - Subnormal temperature
  - Cold intolerance
  - Weight gain
  - Thickened skin

  - Menorrhagia
  - Irritability
  - Apathy
  - Facial edema
  - Masklike expression

Description and etiology

Hyperthyroidism (Graves' disease) — Increase in metabolism rate due to an over-secretion of thyroid hormones. Hyperthyroidism affects women more often than men.

Causes

- Unknown (stress, pregnancy, infection, or autoimmune factors may be involved)

Health care management

- Destruction or removal of hypertrophied thyroid tissue by radiation therapy or surgery
- Provide small, well-balanced meals with increased caloric intake
- Restrict fluids and sodium if edema is present
- Provide calm environment
- Avoid all stimulants
- Follow-up care is important; treatment may cause hypothyroidism
- Medications: antithyroids, sodium iodide
- Surgeries: subtotal thyroidectomy

ASSESSMENT

Hyperthyroidism

Signs and symptoms

- Weight loss
- Increased appetite
- Exophthalmos
- Enlarged thyroid
- Anxiety
- Heat intolerance
- Warm, moist skin

Description and etiology	**Goiter** — Enlargement of the thyroid gland.
Causes	• Lack of iodine in diet • Inability to use iodine • Thyroiditis • Tumors • Hyper- or hypo-functioning
Health care management	• Treat underlying condition • Diet with adequate amounts of iodine • Regular follow-up care is important • Surgeries: subtotal thyroidectomy
ASSESSMENT	**Signs and symptoms**
Goiter	• Visible neck swelling • Dysphagia • Hoarseness

Description and etiology	**Thyroid storm or crisis** — Severe hyperthyroidism of an abrupt onset with symptoms of delirium and tachycardia. Thyroid storm is a medical emergency that is rapidly fatal if untreated.
Causes	• Uncontrolled or poorly controlled hyperthyroidism, precipitated by factors such as: – Infection – Surgery – Trauma – Pregnancy
Health care management	• Symptomatic relief • Removal of all stimulants • Use cold packs to reduce temperature

	• Medications: catecholamine inhibitors, glucocorticoids, beta-adrenergic antagonists, potassium iodide, antipyretics
ASSESSMENT	**Signs and symptoms**
Thyroid storm	• Hyperpyrexia
	• Tachycardia
	• Restlessness and irritability
	• Delirium or psychosis
	• Vomiting
	• Diarrhea
	• Abdominal pain
	• Chest pain
	• Edema
	• Dyspnea
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

THYROID DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	• Place tracheostomy tray in postoperative patient's room
• Promote healing	• Administer medications • Provide pre- and postsurgical care as needed • Prevent chilling or overheating • Provide appropriate diet • Provide calm environment
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Monitor IV fluids

- Plan for patient's discharge
  - Prepare teaching plan
    - For comfort, patients with exophthalmos may wear sunglasses and sleep with the head elevated
    - Discuss avoiding stress, trauma, and infection
    - Discuss appropriate diet
    - Patient may need to wear medical alert bracelet
    - Emphasize the need for regular follow-up care
    - Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Hyperparathyroidism — Increased levels of parathormone are produced by overactive parathyroid glands. Overproduction causes the kidneys to secrete calcium and phosphorus levels that result in kidney stones and bone decalcification.

Causes

- Tumor
- Hypertrophy of the parathyroid
- Chronic renal failure

Health care management

- Treat underlying condition
- Prevent injuries
- Provide diet low in calcium
- Increase fluid intake, especially cranberry juice
- Medications: diuretics
- Surgeries: parathyroidectomy (partial or total)
- Complications: pathological fractures, renal stones

ASSESSMENT

Hyperparathyroidism

Signs and symptoms

- Muscular weakness
- Nausea and vomiting
- Bone pain
- Constipation
- Cardiac arrhythmias
- Fatigue
- Apathy
- Renal stones
- Bony tumors (late stages)

Description and etiology

Hypoparathyroidism — Decreased levels of parathormone from underactive parathyroid glands resulting in decreased calcium levels that slow bone resorption.

Causes

- Idiopathic (cause is unknown, but genetic factors and autoimmune disease may be involved)
- Surgery
- Chronic hypomagnesemia

Health care management

- Maintain calcium level
- Prevent injury from convulsions
- Treat underlying condition
- Provide diet high in calcium, low in phosphorus
- Medications: vitamin D preparations, ionized calcium chloride IV
- Complications: cataracts, calcification of basal ganglia, cardiac arrhythmias, congestive heart failure

ASSESSMENT

Hypoparathyroidism

Signs and symptoms

- Tetany
- Tremors and spasmodic movements

- Paresthesia in extremities
- Dysphagia
- Cataract formation
- Convulsions
- Anxiety
- Irritability
- Delirium

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

HYPER- and HYPOPARATHYROIDISM

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	• Place tracheostomy tray in postoperative patient's room
• Promote healing	• Administer medications • Provide pre- and postsurgical care as needed • Provide appropriate diet and fluids • Prevent injury • Maintain calm, quiet environment
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Patients may need to wear medical alert bracelet – Explain the need for lifelong hormone replacements – Stress injury prevention – Discuss appropriate diet – Emphasize the need for regular follow-up care

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	- Re-assess patient, report any changes. - Assess vital signs again, report any changes. - Contribute to plan of care update.
Description and etiology	**Thyroid tumors** – Most thyroid tumors are benign; thyroid cancer is relatively rare. The most common type, papillary adenocarcinoma, has a high rate of cure. Follicular and anaplastic carcinomas are more rare and harder to cure.
Causes	- Radiation (used in the 1950s to treat acne vulgaris or enlarged thymus tissue, tonsils, and adenoids) - Unknown
Health care management	- Chemotherapy and radiation therapy - Lifelong hormone replacement therapy - Surgeries: thyroidectomy, radical neck dissection
ASSESSMENT	**Signs and symptoms**
Thyroid tumors	- Firm, fixed, painless, palpable nodule - Hoarseness - Stridor on inspiration - Dysphagia
Description and etiology	**Parathyroid tumors** – Tumors of the parathyroid are usually benign adenomas. Adenomas of the parathyroid are the most common cause of hyperparathyroidism. Carcinoma of the parathyroid is rare; the prognosis is very poor.
Causes	- Varies
Health care management	- Surgeries: parathyroidectomy, excision of tumor
ASSESSMENT	**Signs and symptoms**

Parathyroid tumor

- See hyperparathyroidism

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

THYROID and PARATHYROID TUMORS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	• Place tracheostomy tray in postoperative patient's room
• Promote healing	• Provide pre- and postoperative care • Provide care for patient receiving chemotherapy or radiation therapy • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Explain the need for lifelong hormone replacements – Emphasize avoiding stress and injury

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about diseases and disorders of the adrenal glands.

Description and etiology

Adrenal hypofunction — Inadequate secretion of glucocorticoids and mineralocorticoids from the adrenal glands.

Causes

- Adrenal atrophy or hypoplasia
- Removal of adrenal glands
- Cancer
- Progressive destruction and idiopathic atrophy of the adrenal cortex (Addison's disease)
- Infection
- Impaired blood flow to adrenal glands

Health care management

- Lifelong hormone replacement
- Maintain adequate weight
- Increase fluid intake
- Avoid stress
- Sudden, extreme onset of symptoms (especially hypotension, shock, coma, or vasomotor collapse) is a sign of Addisonian crisis, which is a medical emergency
- Medications: glucocorticoids, mineralocorticoids
- Complications: hypotension, vascular collapse, impotence, Addisonian crisis (acute adrenal insufficiency), electrolyte imbalance, hypoglycemia

ASSESSMENT

Adrenal hypofunction

Signs and symptoms

- Fatigue
- Hyperpigmentation
- Hypotension
- Hypoglycemia
- Muscle weakness
- Anorexia
- Weight loss
- Lethargy
- Constipation or diarrhea

ANALYSIS | Report findings to RN who will assimilate information for analysis and nursing care.

ADRENAL HYPOFUNCTION

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Maintain calm environment • Encourage oral fluids, juice, and salted broth in small, frequent feedings • Prevent injury
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Patient should wear medical alert bracelet and carry medication with them at all times – Discuss symptoms that indicate the need for emergency medical care – Teach patient to take medications at the proper time with food – Discuss adjusting medication dosage during periods of increased stressors

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Cushing's syndrome (adrenal hyperfunction) — Excessive secretions of adrenal hormones due to hypersecretion of the adrenal cortex.

Causes

- Tumor
- Hyperfunction of the pituitary
- Prolonged use of corticosteroids

Health care management

- Treat underlying cause
- Prevent injury and infection
- Prevent complications
- Medications: hormone replacements, cytotoxic agents
- Surgeries: adrenalectomy
- Complications: adrenal hypofunction (sequela of treatment), diabetes mellitus, depression

ASSESSMENT

Signs and symptoms

Cushing's syndrome

- Muscle wasting with thin extremities
- Buffalo hump
- Moon face
- Obesity in trunk
- Inability to concentrate
- Purple striae
- Osteoporosis
- Virilism
- Weakness
- Hypertension
- Irritability
- Psychosis

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CUSHING'S SYNDROME

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Administer medications • Give emotional support • Provide diet high in protein and potassium, low in carbohydrates and sodium • Prevent infection and injury • Provide calm environment
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Patients should wear medical alert bracelet – Emphasize need for appropriate diet – Discuss symptoms that should be reported to physician – Emphasize the need to avoid injury and infection; discuss wound care – Teach patient when and how to take medications – Help patient contact support groups for periods of depression

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
OBJECTIVE 4	**Choose the correct word or phrase to complete statements about diseases and disorders of the pituitary gland.**
Description and etiology	**Hypopituitarism** — Insufficient secretion of hormones from the pituitary gland.
Causes	• Tumor • Trauma

- Infection
- Autoimmune disorder
- Congenital disorder
- Ischemic damage following hemorrhage or shock
- Radiation

Health care management

- Treat underlying cause
- Provide low-calorie diet
- Medications: hormone replacements
- Surgeries: excision of tumor

ASSESSMENT

Signs and symptoms

Hypopituitarism

- Organ atrophy
- Emaciation
- Alopecia
- Dry, yellow skin
- Weakness and loss of muscle strength
- Lethargy
- Amenorrhea or oligomenorrhea
- Impotence
- Bradycardia
- Stunted growth in children

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HYPOPITUITARISM

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care as needed • Provide low-calorie diet • Give supportive care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Explain the need for lifelong medication – Teach patient how and when to take medication

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Diabetes insipidus — The posterior lobe of the pituitary gland secretes insufficient levels of antidiuretic hormone, resulting in extreme thirst and polyuria.

Causes

- Primary: unknown (in rare cases, genetic factors may be involved)
- Secondary:
  - pituitary tumor
  - trauma
  - infection

Health care management

- Treat underlying cause
- Provide caffeine-free fluids

- Encourage rest; nocturia may prevent sleep
- Medications: vasopressin

ASSESSMENT **Signs and symptoms**

Diabetes insipidus

- Polyuria
- Polydipsia
- Dry skin with poor turgor
- Weight loss

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

DIABETES INSIPIDUS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medication • Provide fluids • Encourage rest
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Weigh patient daily in early morning
• Plan for patient's discharge	• Prepare teaching plan – Teach patient how and when to use medications – Emphasize the importance of adequate fluid intake; patient should **not** restrict fluids in an attempt to control polyuria – Patient should wear medical alert bracelet

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.

- Contribute to plan of care update.

Description and etiology

Acromegaly — An excess of growth hormones in adults that causes enlargement and elongation of the soft bones in the head, jaw, chin, nose, hands and feet.

Causes

- Hyperplasia of the pituitary
- Tumor

Health care management

- Provide supportive care
- Radiation therapy
- Medications: dopamine agonists, somatostatin analogs, analgesics
- Surgeries: excision of tumor
- Complications: blindness, diabetes mellitus, cardiac dysrhythmias

ASSESSMENT

Signs and symptoms

Acromegaly

- Bulging forehead, nose and chin
- Enlarged lips and tongue
- Enlarged hands and feet
- Muscular weakness
- Headache
- Stiff, painful joints
- Visual disturbances

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ACROMEGALY

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide supportive care • Care for patient receiving radiation therapy • Administer medications • Provide pre- and postoperative care • Provide soft diet
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Teach range-of-motion exercises – Emphasize the need for regular follow-up care

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about pancreatic disorders.

Description and etiology

Diabetes mellitus — A metabolic disturbance caused by insufficient insulin production or inability to use insulin, resulting in hyperglycemia. There are two major types of diabetes.

- **Type I: insulin-dependent diabetes mellitus (IDDM)** — This form usually occurs before the patient is 30 years old and was previously called juvenile-onset diabetes. IDDM usually occurs suddenly. Patients tend to have normal or low body weight. Their bodies produce little or no insulin; they need insulin injections to survive.

- **Type II: non-insulin-dependent diabetes mellitus (NIDDM)** – This form usually occurs in patients 40 and over and was previously called adult-onset diabetes. Symptoms of NIDDM appear gradually. Patients are usually overweight and may be able to control their disease with diet and exercise. Patients with NIDDM usually secrete insulin, but it is not used by their bodies.

Causes

- Unknown; factors may include autoimmune disorder, infection, obesity, and genetic factors

Health care management

- Diet therapy
- Exercise
- Weight loss (NIDDM)
- Regular blood glucose testing
- Skin care
- Medications: insulin, oral hypoglycemics (NIDDM), glucagon
- Complications: hypoglycemia, increased risk of infection, blindness, cardiovascular disorders, renal disorders

ASSESSMENT

Signs and symptoms

Diabetes mellitus

- IDDM
  - Polyuria
  - Polydipsia
  - Polyphagia
  - Fatigue
  - Weakness
  - Weight loss
- NIDDM
  - Early: no symptoms
  - Late: IDDM symptoms
  - Slow healing of wounds
  - Pruritus
  - Blurred vision

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

DIABETES MELLITUS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
•, Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide well-balanced meals • Provide meticulous skin care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor blood glucose • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss using calorie count or meal exchanges to control diet – Teach patient when and how to take medications – Discuss storage of medications – Teach patient to test blood for glucose – Instruct patient to inspect and care for skin, including foot care – Instruct patient to exercise daily and balance diet and medication – Encourage patient to maintain optimal weight – Discuss signs of hypo- or hyperglycemia that require immediate action – Discuss other symptoms that should be reported to physician – Patients should consult with diabetic educator

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Ketoacidosis — An extremely high level of glucose (hyperglycemia) and acid (ketone bodies) in the bloodstream. This condition occurs most frequently in IDDM patients with an inadequate level of insulin. Ketoacidosis is a medical emergency; it can lead to coma if left untreated.

Causes

- Insufficient dose of insulin
- Infection
- Stress
- Failure to follow diet
- Gastrointestinal disorders

Health care management

- Treat underlying condition
- Medications: insulin IV
- Complications: coma

ASSESSMENT

Signs and symptoms

Ketoacidosis

- Slow onset
- Hot, dry skin
- Drowsiness
- Lethargy
- Nausea and vomiting
- Polydipsia
- Polyuria
- Fruity odor to breath
- Delirium
- Deep respirations

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

KETOACIDOSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Call for emergency help if necessary • Administer medications • Administer oxygen if prescribed
• Continually monitor patient's condition	• Monitor vital signs, I/O • Check blood glucose level hourly • Monitor IV
• Plan for patient's discharge	• Prepare teaching plan – Teach patient how and when to administer insulin, if necessary – Emphasize the need to follow planned diet – Emphasize the need to monitor blood glucose levels

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Hypoglycemia — An extremely low level of glucose in the bloodstream from an excessive level of insulin. Hypoglycemia occurs in patients with IDDM and NIDDM. This condition is a medical emergency that may lead to coma if not treated.

Causes

- Excessive exercise
- Delayed or reduced food intake
- Overdose of insulin or oral hypoglycemic

Health care management

- Give conscious patient oral glucose immediately
- Give unconscious patient injection of glucose immediately

- Give carbohydrates after symptoms subside
- Medications: glucose IM or IV
- Complications: coma

ASSESSMENT

Signs and symptoms

Hypoglycemia

- Sudden onset of symptoms
- Pale, cool, diaphoretic skin
- Nervousness
- Hunger
- Confusion
- Weakness
- Rapid, shallow respirations
- Headache

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HYPOGLYCEMIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Call for emergency help if necessary • Administer glucose
• Continually monitor patient's condition	• Monitor vital signs, I/O • Monitor blood glucose • Monitor airway • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Emphasize the need to monitor blood glucose levels – Stress a balance of exercise, diet, medication, and weight maintenance

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the endocrine system.

Description and etiology

Hypopituitary dwarfism – Short stature caused by hyposecretion of growth hormone by the pituitary gland. These children usually have a normal birth weight, but fail to grow at a normal rate.

Causes

- Tumor
- Genetic factors
- Idiopathic

Health care management

- Hormone replacements
- Treat underlying cause
- Emotional support
- Medications: natural or synthetic hormones
- Surgeries: excision of tumor

ASSESSMENT

Hypopituitary dwarfism

Signs and symptoms

- Short stature (apparent by age 4)
- Normal body proportions

Description and etiology

Gigantism – Abnormally large body structure caused by hypersecretion of growth hormone by the pituitary gland.

Causes

- Pituitary hyperplasia
- Hypothalamus defect

Health care management	• Treat underlying cause
	• Radiation therapy
	• Emotional support
	• Medications: hormone replacement
	• Surgeries: excision of tumor
	• Complications: hypertension, osteoporosis, heart failure
ASSESSMENT	**Signs and symptoms**
Gigantism	• Overgrowth, especially in the long bones
	• Normal body proportions
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

PITUITARY GROWTH DISTURBANCES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care as needed • Care for patient receiving radiation therapy • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Help patient and parents contact support groups – Explain the need for lifelong hormone therapy – Discuss symptoms that should be reported to the physician

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

DIAGNOSTIC PROCEDURES

Laboratory studies

- **Blood glucose monitoring** – Testing the level of glucose in a blood sample obtained from a finger stick; diabetic patients can use this test to self-monitor their blood glucose
- **Fasting blood sugar (FBS)** – A measure of the blood sugar after an 8-hour fast
- **Protein-bound iodine (PBI)** – A measure of the level of thyroid hormone in the blood
- **Serum concentrations** – Various tests measure the amount of T_3, T_4, glucose, sodium, potassium, and hormones in the blood
- **Thyrotropin radioimmunoassay** – Evaluation of the level of thyroid-stimulating hormone in the blood is done to determine if the thyroid is diseased or if symptoms are caused by pituitary or hypothalamus disease

Provocative tests – Serum hormones are measured before and after stimulation to evaluate gland function.

Radioactive iodine uptake (RAIU) – A test of thyroid function. The patient is given a dose of sodium iodide. The thyroid is scanned using a scintillation camera at intervals of 2, 6, and 24 hours after iodide is given to determine the amount of iodide accumulated.

Suppression tests – Serum hormones are measured before and after suppression to evaluate gland function.

Thyroid scan – The patient is given a dose of sodium iodide, which collects in the thyroid. The thyroid is then scanned using a scintillation camera to visualize the gland.

SURGICAL PROCEDURES

Adrenalectomy – Removal of all or part of the adrenal gland

Parathyroidectomy – Removal of all or part of the parathyroid gland

Neck dissection — Removal of the lymph nodes of the neck (radical neck dissection includes removal and reconstruction of the jugular vein, sternocleidomastoid muscle, and spinal accessory nerve)

Thyroidectomy – Removal of all or part of the thyroid gland

ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM

XI

Name ______________________________ Score __________

OBJECTIVE 7

Plan care for patients with diseases and disorders of the endocrine system.

INTRODUCTION

Patients with hyperthyroidism (Graves' disease) usually have a family history of the disease. Common symptoms are nervousness, irritability, exaggerated emotions, and mood swings. They feel fatigued and often have increased hunger, but experience weight loss, and have a heat intolerance. They may show signs of angina, heart palpitations, sweating, tachycardia, congestive heart failure, and the classic symptoms of exophthalmos, and have a nodular swelling in the throat known as a goiter.

Your patient was admitted to the hospital with poorly-managed hyperthyroidism. Her family says her mood swings are becoming frequent and she often complains of feeling hot.

DIRECTIONS

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records
- Use content area vocabulary

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records
- Write instructions

Care plans are essentially research projects for each of your patients. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Use the information in Objective 2 to complete a plan of care for your patient. Your instructor will provide a care plan form.

Nursing interventions include:

- Monitor vital signs
- Record intake and output
- Assess skin condition
- Evaluate nutrition and fluids
- Balance activity level with rest
- Maintain patient comfort
- Encourage calm environment
- Identify coping mechanisms
- Assess muscles and joints
- Teach personal care
- Discuss emotional lability

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM

XI

Name ______________________________ Score __________

OBJECTIVE 8

Assess the teaching needs of a diabetic patient and develop a teaching plan based on identified needs.

INTRODUCTION

Patients with diabetes mellitus may have high blood sugar (hyperglycemia) or low blood sugar (hypoglycemia). After eating, when the glucose level rises in the blood, insulin is secreted to help maintain the blood glucose at normal levels. Decreased secretions between meals facilitates the conversion of glycogen amino acids and triglycerides into glucose in the liver. Insulin-dependent diabetics produce little or no insulin; non-insulin-dependent diabetics have an inadequate glucose-sensing mechanism. Obese patients secrete an excessive amount of insulin.

Diabetic patients need extensive education to take prescribed insulin, test blood glucose, eat properly, and exercise adequately. Reinforcing these aspects at every opportunity is an important part of the nurse's responsibility.

If you are in a clinical situation, your instructor will assign a patient and you will assist that patient with the selection of appropriate foods for his or her needs.

If you are in a classroom situation, your instructor will provide a case study for you to complete the same assignment.

DIRECTIONS

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Use content area vocabulary

The practical nurse has to be knowledgeable, supportive, and able to give informed advice about the disease and complications. Use the ADA dietary handbook and additional medical-surgical books to help you plan a teaching session.

Teach the patient to:

- Calculate a diet and to make well-balanced meals with a variety of foods. Direct patients and families to agencies that provide additional assistance in planning ideas for diabetics.
- Balance diet, medication, and exercise.

- Inspect the skin daily for any abrasions, care for feet and toenails, wear properly fitting shoes, and keep the skin clean and dry.
- Test the blood glucose level.
- Administer insulin using the prescribed technique.
- Observe frequently for symptoms of adverse reaction to insulin or hypoglycemia.

1. What will you do to prepare the patient for the teaching session?

2. What materials, supplies, or equipment will you need?

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Oral Presentation
- Adapt presentation to specific audience

Interactive Communications
- Communicate with clients/customers/patients

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

3. Outline the teaching plan below.

ASSIGNMENT SHEET 3 — APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM — XI

Name ______________________________ Score __________

OBJECTIVE 9

Assist a patient to select an appropriate diet based on an exchange list.

INTRODUCTION

Diabetic patients must use strict guidelines to plan their diets. If you are in a clinical situation, your instructor will assign a patient and you will assist that patient with the selection of appropriate foods for his or her needs.

If you are in a classroom situation, your instructor will provide a case study for you to complete the same assignment.

DIRECTIONS

Using your dietary/nutritional textbook, prepare a diet appropriate for the patient or case assigned to you. The patient's diet plan should take into consideration cultural and personal preferences, occupation, lifestyle, exercise regime, activity pattern, glucose blood level, and the time of medication. Calculate menus using the ADA exchange system. Teach the patient about the relationship of exercise to diet.

List appropriate food choices based on an exchange list. Assist patient in selecting a diet from these foods.

Patient ___________________________________ Room ______

Doctor ____________________ Diagnosis __________________

Maximum calories per day __________

Carbohydrates _______ Fats _______ Proteins ________

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records
- Use content area vocabulary

Language
- Use standard grammar, spelling, and capitalization

Functional Writing
- Complete forms and records

Operation and Calculation
- Calculate with whole numbers
- Calculate with fractions

Life Science

- Investigate health issues

Interactive Communications

- Communicate with clients/customers/patients

General Relating

- Analyze/apply nonverbal communication
- Interact with clients/customers/patients

Cognitive Activities

- Collect/record information
- Create a finished product

Job Acquisition/Development

- Master specific job task/procedure
- Practice good work habits/attitudes
- Deal effectively with customers/clients/patients

MEAL	FOODS	EXCHANGES
Breakfast		
Lunch		
Afternoon snack		
Dinner		
Evening snack		

Comments or other considerations:

ASSIGNMENT ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM XI

ASSIGNMENT SHEET 1

Care plan should meet the following criteria:

- Nursing process followed
  - Assessment
  - Analysis (under direction of RN)
  - Planning
  - Implementation
  - Outcome/evaluation (under direction of RN)
- Nursing actions/interventions include discharge planning
- Check that students include the following:
  - Monitor vital signs
  - Record intake and output
  - Assess skin condition
  - Evaluate nutrition and fluids
  - Balance activity level with rest
  - Maintain patient comfort
  - Encourage calm environment
  - Identify coping mechanisms
  - Assess muscles and joints
  - Teach personal care
  - Discuss emotional lability

ASSIGNMENT SHEET 2

1. The nurse should consider the following factors:
   - Are there any distractions in the room?
   - Does the patient need glasses?
   - Does the patient feel uncomfortable or need to use the bathroom?
   - Is there sufficient lighting?
   - What is the patient's level of education?
2. - Dietary handbook
   - Printed information about medications, exercise, blood/urine testing, adverse reactions, skin care, and information about the disease

- Pencil and paper for patient to make notes.

3. The teaching plan should include the following:

   - Instructions on calculating a diet and making well-balanced meals with a variety of foods
   - Directing patients and families to agencies that provide additional assistance in planning diets for diabetics
   - Instructions on a daily exercise routine and the correlation between diet, medication
   - Instructions on skin care and daily observation
   - Instructions on insulin administration
   - Instructions on blood/urine testing
   - Instructions on recognizing and treating adverse reactions to insulin or hypoglycemia

4. Check that answers are appropriate to the patient's needs.

ASSIGNMENT SHEET 3

Check that answers are appropriate to the patient's needs

- Primary considerations:
  - Cultural and personal preferences
  - Occupation and lifestyle considerations
  - Exercise regime
  - Activity pattern
  - Time of medication
  - Relationship between exercise and diet
- Additional considerations:
  - Calorie count should be adequate for growth and development or for weight reduction, if appropriate
  - Most of the carbohydrates should come from starches
  - Limit the refined sugars
  - Less than 10% fats
  - Consistency in timing and distribution of nutrients
- Teaching measures:
  - Exercise decreases the need for insulin and increases the need for food

- Rapid acting sugar should be taken and carried before exercising
- Exercise should be planned to avoid the period of peak insulin action

JOB SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM

XI

Name ______________________________ Score ________

OBJECTIVE 10

Determine the insulin needs for patients on a sliding scale.

INTRODUCTION

A sliding scale is a graduated scale used to determine the amount of insulin to give patients. The amount of insulin to be given is based on the level of glucose in the blood. The nurse does a blood or urine test, then gives insulin according to the test results. The doctor orders the type, route, time, and the amount of insulin to be administered. The nurse does a blood test at the specified time, checks the results with the insulin order, then gives the insulin dose that is appropriate for the level of sugar in the blood.

Insulin that is administered orally is delivered into the blood more slowly than a subcutaneous injection; intramuscular injections offer a more rapid delivery. Subcutaneous injections are given in the adipose tissue beneath the skin; this is the recommended route for insulin injections.

Use an actual case or the following scenario.

Your patient is a 38-year-old insulin-dependent diabetic. Recently she has not been able to balance her insulin needs with her exercise regime and diet. Her doctor admitted her into the hospital to get her diabetes under control again. The sliding scale will provide an accurate record of her glucose level and insulin needs.

EQUIPMENT AND SUPPLIES

- Sterile disposable 25G 5/8" needle
- Sterile alcohol sponge
- Insulin bottle
- Clean gloves

PROCEDURE

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

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Functional Writing
- Complete forms and records

Data Analysis and Display
- Interpret charts and tables
- Collect/record data

General Science
- Use scientific instruments

Interactive Communications
- Communicate with supervisors

Cognitive Activities
- Collect/record information
- Create a finished product
- Evaluate results/outcomes

Job Acquisition/Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure as each step is performed.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient as each step is performed.	_____	_____
3. Wash your hands.	_____	_____
4. Do a blood test at the specified time.	_____	_____
5. Check the results of the glucose level with the patient's medication record.	_____	_____
6. Determine the amount, time, route, and type of insulin.	_____	_____
7. Draw up the correct amount of insulin.	_____	_____
8. Check the patient's medication record with the physician's orders to verify the order.	_____	_____
9. Have the RN confirm the correct type, time, route, and amount according to agency policy.	_____	_____
10. Take the insulin syringe and alcohol sponge to the patient's room.	_____	_____
11. Confirm patient's identity before giving the injection.	_____	_____

	Yes	No
12. Ask the patient to state his or her name.	____	____
13. Wash your hands.	____	____
14. Put on gloves.	____	____
15. Select the appropriate injection site.	____	____
16. Administer the insulin shot.	____	____
17. Clean up:		
a. Return medication to its proper place.	____	____
b. Properly discard disposable equipment.	____	____
c. Wash your hands.	____	____
18. Document procedure according to agency requirements.	____	____
Evaluation		
1. Recheck patient in 30 minutes for comfort.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS ____

____

____

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PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:				
Used proper equipment correctly	4	3	2	1
Used universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

EVALUATION KEY

3 **Moderately Skilled** — Has performed job during training program; limited additional training may be required

2 **Limited Skill** — Has performed job during training program; additional training is required to develop skill

1 **Unskilled** — Is familiar with process, but is unable to perform job

JOB SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM **XI**

Name ______________________________ Score __________

OBJECTIVE 11 **Perform finger stick for blood glucose monitoring**

INTRODUCTION

Urine tests are rarely used to check patients' glucose levels— blood glucose monitoring is more accurate. The nurse may use a traditional finger lancet or a self-sticking lancet to obtain the blood sample.

EQUIPMENT AND SUPPLIES

- Reagent strips
- Blood glucose monitor
- Sterile gauze pads or cotton balls
- Alcohol preps
- Lancet
- Sterile bandage strips
- Gloves

PROCEDURE

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure as each step is performed.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient as each step is performed.	_____	_____

Reading Comprehension
- Gain factual information

Functional Reading
- Interpret forms and records
- Follow written instructions
- Use content area vocabulary

Functional Writing
- Complete forms and records

General Science
- Use scientific instruments

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Interactive Communications
- Communicate with supervisors

Cognitive Activities
- Collect/record information
- Create a finished product
- Evaluate results/ outcomes

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
3. Wash your hands.	____	____
4. Select a puncture site.	____	____
NOTE: A site on the side of the patient's finger, close to the nail bed, is less painful for the patient		
5. Put on gloves.	____	____
6. Wipe the puncture site with alcohol; allow to air dry.	____	____
7. While slightly squeezing the patient's finger, pierce the skin sharply with the lancet.	____	____
8. Cover the reagent strip with blood.	____	____
NOTE: The blood on the strip should be a round, shiny drop, free of bubbles, that covers the area completely and will remain wet throughout the test.		
9. Apply pressure to the puncture site.	____	____
10. Leave the blood on the strip for the length of time specified.	____	____
11. Wash or blot strip as specified.	____	____
12. Insert the strip into the blood glucose monitor according to directions.	____	____
13. Read the monitor.	____	____
14. After bleeding stops, apply sterile bandage strip.	____	____

	Yes	No
15. Clean up:		
a. Return reusable equipment to its proper place after proper cleaning.		
b. Discard disposable equipment according to regulations.		
c. Wash your hands.		
16. Document procedure, results, and interventions according to agency requirements.		

Evaluation

	Yes	No
1. Recheck patient in 30 minutes for comfort and observe puncture site.		

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

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Criteria:				
Used proper equipment correctly	4	3	2	1
Used universal precautions	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

____

____

____

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

EVALUATION KEY

3 **Moderately Skilled** — Has performed job during training program; limited additional training may be required
2 **Limited Skill** — Has performed job during training program; additional training is required to develop skill
1 **Unskilled** — Is familiar with process, but is unable to perform job

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM

XI

OBJECTIVE 1

Match terms associated with diseases and disorders of the endocrine system to their definitions. Write the correct letter in the blank.

Part 1

_____ 1. Incomplete metabolism of fatty acids that accumulate in the body

_____ 2. Excessive menstrual bleeding

_____ 3. Reactions that take place as a result of physical and chemical changes

_____ 4. Excessive urination at night

_____ 5. Feeling of numbness, pricking, or tingling

_____ 6. Excessive urination

_____ 7. Intermittent tonic muscle spasms

_____ 8. Presence or development of male secondary characteristics in a woman

_____ 9. Mental disorder in which patients lose contact with reality

_____ 10. Inability to tolerate light

a. amenorrhea
b. endocrine glands
c. exophthalmos
d. glucosuria
e. hyperpyrexia
f. idiopathic
g. insulin
h. ketosis
i. labiomental
j. menorrhagia
k. metabolism
l. nocturia
m. paresthesia
n. photophobia
o. polyphagia
p. polyuria
q. psychosis
r. tetany
s. virilism

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Part 2

______ 1. Absence of menstruation

______ 2. Excessive thirst

______ 3. Pancreatic hormone essential for metabolizing glucose

______ 4. Without a clear cause

______ 5. Sugar in the urine

______ 6. Abnormal protrusion of the eyeball

______ 7. Elevation of the body temperature above 106° F (41° C)

______ 8. Eating abnormally large amounts

______ 9. Organs which secrete hormones that regulate the body's activity

______ 10. A tumor of the adrenal system that causes oversecretion of epinephrine and norepinephrine

a. amenorrhea
b. dentigerous
c. endocrine glands
d. exophthalmos
e. glucosuria
f. hydrorrhea
g. hyperpyrexia
h. idiopathic
i. insulin
j. ketosis
k. menorrhagia
l. pheochromocytoma
m. polydipsia
n. polyphagia
o. triphasic
p. virilism

May be photocopied for student use

OBJECTIVE 2

Choose the correct word or phrase to complete statements about diseases and disorders of the thyroid and parathyroid glands. Write the correct letter in the blank.

_____ 1. A patient with hyperthyroidism may exhibit symptoms such as

a. exophthalmos and anxiety
b. fatigue and weight gain
c. abrupt onset of delirium and tachycardia
d. increased calcium and phosphorus levels resulting in kidney stones and bone decalcification

_____ 2. Hypothyroidism patients have symptoms that include ____________.

a. bulging eyes and anxiety
b. fatigue and weight gain
c. abrupt onset of delirium and tachycardia
d. increased calcium and phosphorus levels resulting in kidney stones and bone decalcification

_____ 3. Complications of hypothyroidism include

a. cardiac failure
b. convulsions
c. hypertension
d. tachycardia

_____ 4. Treatment for hyperthyroidism may cause

a. cancer
b. Graves' disease
c. hypothyroidism
d. thyroid storm

_____ 5. Causes of goiter include

a. excessive iodine
b. inability to use iodine
c. infection
d. hyperfunction of the parathyroid

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_____ 6. Signs and symptoms of goiter include

a. anorexia
b. exophthalmos
c. fever and chills
d. visible neck swelling

_____ 7. Thyroid storm may be precipitated by

a. diabetes mellitus
b. exposure to extreme cold
c. menstruation
d. surgery

_____ 8. Signs and symptoms of thyroid storm include

a. cold, clammy skin
b. hyperpyrexia
c. lethargy
d. renal stones

_____ 9. When writing care plans for patients with hyperthyroidism, you must remember that they need

a. increased fluid intake
b. a calm environment
c. instruction on taking iodine preparations
d. oxygen

_____ 10. The teaching plan for a patient with hyperthyroidism should include

a. discuss the need to carry medication at all times
b. discuss using calorie counts or meal exchanges
c. emphasize the need for fluid restrictions
d. suggest that patients with exophthalmos wear sunglasses

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_____ 11. Which of the following conditions is a medical emergency?

a. goiter
b. hyperthyroidism
c. lymphocytic thyroiditis
d. thyroid storm

_____ 12. Causes of hyperparathyroidism include

a. chronic hypomagnesemia
b. hypertrophy of the parathyroid
c. surgery
d. trauma

_____ 13. Complications of hyperparathyroidism include

a. cardiac failure
b. growth retardation
c. pathological fractures
d. renal failure

_____ 14. Complications of hypoparathyroidism include

a. cataracts
b. diabetes mellitus
c. pathological fractures
d. renal stones

_____ 15. A patient with hypoparathyroidism might show signs and symptoms such as

a. amenorrhea
b. glucosuria
c. tetany
d. virilism

_____ 16. Thyroid tumors are often caused by

a. genetic factors
b. hyperfunction
c. infection
d. radiation

_____ 17. Signs and symptoms of a thyroid tumor include

a. dysphagia and hoarseness
b. fever and chills
c. nausea and vomiting
d. redness and swelling

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_____ 18. Signs and symptoms of a parathyroid tumor include

a. dysphagia and hoarseness
b. fever and chills
c. nausea and vomiting
d. redness and swelling

_____ 19. Preparing for the discharge of a patient with a thyroid or parathyroid tumor should include explaining the need for

a. diet therapy
b. lifelong hormone replacements
c. medical alert bracelet
d. proper foot care

OBJECTIVE 3 **Choose the correct word or phrase to complete statements about diseases and disorders of the adrenal glands.** Write the correct letter in the blank.

_____ 1. Adrenal hypofunction is defined as inadequate secretion of

a. corticosteroids
b. epinephrine and norepinephrine
c. glucocorticoids and mineralocorticoids
d. antidiuretic hormone

_____ 2. Progressive destruction and idiopathic atrophy of the adrenal cortex is a form of adrenal hypofunction known as

a. Addison's disease
b. Cushing's syndrome
c. Graves' disease
d. Pemberton's disease

_____ 3. Patients with adrenal hypofunction may show signs and symptoms such as

a. buffalo hump and moon face
b. hyperpigmentation, hypotension, and hypoglycemia
c. nausea, vomiting, and hypertension
d. severe headache and heat intolerance

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_____ 4. Patients with Cushing's syndrome have

a. excessive secretions of glucocorticoid and androgens or sex hormones due to hypersecretion of the adrenal cortex
b. progressive destruction and idiopathic atrophy of the adrenal cortex
c. excessive secretions of adrenal hormones due to hypersecretion of the adrenal cortex
d. tumors, usually benign, that invade the adrenal medulla causing arterial hypertension, tachycardia, and tremors

_____ 5. Signs and symptoms of Cushing's syndrome include

a. buffalo hump and moon face
b. hyperpigmentation, hypotension, and hypoglycemia
c. nausea, vomiting, and hypertension
d. severe headache and heat intolerance

_____ 6. Part of the care plan for patients with Cushing's syndrome should include

a. emphasizing the importance of adequate fluid intake; the patient should not restrict fluids in an attempt to control polyuria
b. giving meticulous skin care
c. monitoring IV lines
d. providing diet high in protein and potassium, low in carbohydrates and sodium

_____ 7. To promote healing for a patient with adrenal hypofunction, the nurse should

a. encourage regular exercise
b. maintain a calm environment
c. provide a low-sodium diet
d. restrict fluids

_____ 8. The teaching plan for the patient with adrenal hypofunction should include

a. advise patient against taking medication with food
b. help patient contact support groups for periods of depression
c. discuss adjusting medication dosage during periods of increased stressors
d. emphasize the need to avoid injury and infection

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_____ 9. Signs of Addisonian crisis in patients with adrenal hypofunction occur

a. after using medication
b. upon waking
c. over a period of several hours
d. suddenly

_____ 10. The teaching plan for patients with Cushing's syndrome should include

a. advising patient to carry medication at all times
b. emphasizing the need to balance rest and exercise
c. instructing patient to wear medical alert bracelet
d. recommend genetic counseling

OBJECTIVE 4

Choose the correct word or phrase to complete statements about diseases and disorders of the pituitary gland. Write the correct letter in the blank.

_____ 1. Hypopituitarism may be caused by

a. diabetes mellitus
b. hyperplasia
c. infection or trauma
d. malnutrition

_____ 2. In children, hypopituitarism can cause

a. cretinism
b. diabetes mellitus
c. gigantism
d. stunted growth

_____ 3. Signs and symptoms of hypopituitarism include

a. weakness and loss of muscle strength
b. cool, moist skin
c. polyuria and polydipsia
d. visual disturbances

_____ 4. Part of the care plan for patients with hypopituitarism includes

a. instructing patient to wear a medical alert bracelet
b. monitoring IV lines
c. providing a low-calorie diet
d. teaching range-of-motion exercises

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_____ 5. Patients with diabetes insipidus have insufficient levels of

a. antidiuretic hormone
b. epinephrine
c. growth hormone
d. insulin

_____ 6. Signs and symptoms of diabetes insipidus include

a. cool, moist skin
b. enlarged hands and feet
c. nausea and vomiting
d. polydipsia and polyuria

_____ 7. Acromegaly involves an excess of

a. antidiuretic hormone
b. epinephrine
c. growth hormone
d. insulin

_____ 8. Complications of acromegaly include

a. coma
b. blindness
c. hypoglycemia
d. renal disorders

_____ 9. Signs and symptoms of acromegaly include

a. bulging forehead, nose, and chin
b. dry skin with poor turgor
c. polydipsia and polyuria
d. weight loss

_____ 10. The teaching plan for patients with diabetes insipidus should include

a. advise patient to take medication with food
b. emphasize the importance of adequate fluid intake
c. instruct patient to restrict fluids to control polyuria
d. stress the need to avoid injury and infection

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OBJECTIVE 5

Choose the correct word or phrase to complete statements about pancreatic disorders. Write the correct letter in the blank.

_____ 1. Which of the following characteristics describes patients with insulin-dependent diabetes mellitus (IDDM)?.

a. disease controlled by diet and exercise
b. tend to have normal or low body weight
c. onset is usually after age 40
d. use oral hypoglycemic medication

_____ 2. Diabetes mellitus is defined as

a. extremely high level of glucose and ketone bodies in the bloodstream
b. low level of glucose caused by insufficient insulin production
c. overproduction of glucose
d. metabolic disturbance caused by insufficient insulin production or inability to use insulin

_____ 3. Which of the following characteristics describes patients with non-insulin-dependent diabetes mellitus (NIDDM)?

a. disease controlled by regular insulin injections
b. onset is usually before age 30
c. patients secrete insulin but their bodies do not use it
d. symptoms appear suddenly

_____ 4. Complications of diabetes mellitus include

a. blindness
b. Cushing's syndrome
c. hypertension
d. liver disorders

_____ 5. The teaching plan for a patient with diabetes mellitus should include

a. discuss signs of hypo- or hyperglycemia that require immediate action
b. emphasize the importance of adequate fluid intake
c. teach patient to self-monitor blood pressure
d. teach range-of-motion exercises

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_____ 6. Signs and symptoms of IDDM include

a. blurred vision
b. pruritus
c. hot, dry skin
d. polyuria and polydipsia

_____ 7. Signs and symptoms of NIDDM include

a. confusion
b. diaphoresis
c. slow healing of wounds
d. severe headache

_____ 8. Ketoacidosis usually occurs in

a. IDDM patients who take oral hypoglycemics
b. IDDM patients with an inadequate level of insulin
c. NIDDM patients who do not follow the prescribed diet
d. undiagnosed NIDDM cases

_____ 9. Signs and symptoms of ketoacidosis include

a. cold, clammy skin
b. fruity odor to breath
c. rapid, shallow respirations
d. sudden, severe headache

_____ 10. Hypoglycemia may be caused by

a. delayed or reduced food intake
b. infection
c. inadequate exercise
d. stress

_____ 11. Signs and symptoms of hypoglycemia include

a. deep respirations
b. drowsiness and lethargy
c. nausea and vomiting
d. pale, cool, diaphoretic skin

_____ 12. The teaching plan for a patient with ketoacidosis or hypoglycemia should include

a. encourage patient to lose weight
b. emphasize the need to monitor glucose levels
c. instruct patient to carry oral hypoglycemics at all times
d. teach patient to self-monitor blood pressure

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_____ 13. Health care management for patients with ketoacidosis includes

a. oral hypoglycemics
b. insulin IV
c. oral or IM glucose
d. oral carbohydrates

_____ 14. Health care management for patients with hypoglycemia includes

a. oral hypoglycemics
b. insulin IV
c. glucose IM or IV
d. fluid restrictions

OBJECTIVE 6

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the endocrine system. Write the correct letter in the blank.

_____ 1. Which of the following characteristics describes children with hypopituitary dwarfism?

a. arms and legs are long and out of proportion
b. growth occurs at a normal rate but stops early
c. usually born prematurely
d. usually have a normal birth weight

_____ 2. The size of a child with hypopituitary dwarfism is usually apparent

a. at birth
b. by age six months
c. by age four
d. by puberty

_____ 3. Gigantism is caused by

a. hyposecretion of pituitary hormones
b. failure of long bones to stop growing
c. hypersecretion of growth hormone
d. overproduction of glucocosteroids

_____ 4. Complications of gigantism include

a. blindness
b. osteoporosis
c. hypotension
d. renal failure

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_____ 5. The teaching plan for a patient with a pituitary growth disorder should include

a. explain the need for lifelong hormone therapy
b. instruct patient to wear a medical alert bracelet
c. teach patient to self-inject insulin
d. emphasize the need to follow the prescribed diet

NOTE: Objectives 7-11 are evaluated on the Job Sheets/Assignment Sheets in this unit. If you have not completed these components, see your instructor.

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WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM

XI

OBJECTIVE 1

Part 1

1.	h	6.	p
2.	j	7.	r
3.	k	8.	s
4.	l	9.	q
5.	m	10.	n

Part 2

1.	a	6.	d
2.	m	7.	g
3.	i	8.	n
4.	h	9.	c
5.	e	10.	l

OBJECTIVE 2

1.	a	6.	d	11.	d	16.	d
2.	b	7.	d	12.	b	17.	a
3.	b	8.	b	13.	c	18.	a
4.	c	9.	b	14.	a	19.	b
5.	b	10.	d	15.	c		

OBJECTIVE 3

1.	c	6.	d
2.	a	7.	b
3.	b	8.	c
4.	c	9.	d
5.	a	10.	c

OBJECTIVE 4

1.	c	6.	d
2.	d	7.	c
3.	a	8.	b
4.	c	9.	a
5.	a	10.	b

OBJECTIVE 5

1.	b	6.	d	11.	d
2.	d	7.	c	12.	b
3.	c	8.	b	13.	b
4.	a	9.	b	14.	c
5.	a	10.	a		

OBJECTIVE 6

1.	d
2.	c
3.	c
4.	b
5.	a

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE REPRODUCTIVE SYSTEM

XII

INTRODUCTION

People are more knowledgeable today about preventing problems associated with the reproductive system. Increased awareness has inspired people to ask for information about or treatment of diseases and disorders associated with the reproductive system. Although men and women are better informed about the topic of reproductive health, many still ignore preventive measures and neglect signs and symptoms of illness. This often happens because they are embarrassed, and place special significance on the reproductive organs. Even today, diseases and disorders of the reproductive system continue to threaten lives, and the physical, and emotional well-being of men and women. Many problems can be prevented, treated, or cured.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize etiology, symptoms, causes, and treatments of diseases and disorders of the reproductive system; and apply associated nursing processes to scenarios depicting related situations. In addition, you will demonstrate these competencies by completing the Assignment Sheet and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the reproductive system to their correct definitions.
2. Choose the correct word or phrase to complete statements about common menstrual disorders.
3. Choose the correct word or phrase to complete statements about infertility.
4. Choose the correct word or phrase to complete statements about diseases and disorders of the external genitalia and vagina.
5. Choose the correct word or phrase to complete statements about diseases and disorders of the cervix and uterus.

6. Choose the correct word or phrase to complete statements about diseases and disorders affecting the ovaries and fallopian tubes.
7. Choose the correct word or phrase to complete statements about diseases and disorders of the breast.
8. Choose the correct word or phrase to complete statements about surgical interventions affecting the female reproductive system.
9. Choose the correct word or phrase to complete statements about common diseases and disorders of the male reproductive system.
10. Choose the correct word or phrase to complete statements about sexually transmitted diseases.
11. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the reproductive system.
12. Plan care for a patient with disorders of the reproductive system. (Assignment Sheet)

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objective 1, basic information that supports the rest of the unit;

  Part 2 — Objectives 2-4, the next three groupings, including menstrual disorders, infertility, and diseases and disorders of the external genitalia and vagina;

  Part 3 — Objectives 5-8, the next four groupings, including diseases and disorders of the cervix, uterus, ovaries, fallopian tubes, and breast, and surgical interventions affecting the female reproductive system; and

  Part 4 — Objectives 9-11, the next three groupings, including diseases and disorders of the male reproductive system, sexually transmitted diseases, and pediatric diseases and disorders.
- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a radiologist and a representative from Reach to Recovery to discuss diseases and disorders of the reproductive system.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet, and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.

- Obtain models and large pictures of the reproductive system.

- Make a poster of the reproductive system.

- Make a bulletin board showing the reproductive system.

- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration

  - Assist students to conduct a chapter service project on the reproductive system.

  - Develop objectives for service project and identify a theme.

  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.

  - Plan a community or school health project that involves disseminating pamphlets about care of patients with diseases and disorders of the reproductive system.

  - Develop and/or participate in a community teaching project that involves diseases and disorders of the reproductive system.

- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.

- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the reproductive system to their correct definitions.

- Discuss terms associated with the reproductive system.

- Have students play reinforcement games and work crossword puzzles using terms.

- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about common menstrual disorders.

- Have students share relevant experiences about friends or family members who have problems related to common menstrual disorders.
- Have students share ideas that might be helpful in evaluating common menstrual disorders.
- Discuss exercise and nutrition as they relate to menstrual cycle.

Objective 3: Choose the correct word or phrase to complete statements about infertility.

- Have students share relevant experiences about friends or family members who have problems related to infertility.
- Have students share ideas that might be helpful in evaluating infertility.
- Discuss ways in which nurses can improve the care of patients with infertility.

Objective 4: Choose the correct word or phrase to complete statements about diseases and disorders of the external genitalia and vagina.

- Have students share relevant experiences about friends or family members who have problems related to diseases and disorders of the external genitalia and vagina.
- Have students share ideas that might be helpful in evaluating diseases and disorders of the external genitalia and vagina.
- Review anatomy and physiology of the female reproductive system.
- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the external genitalia and vagina.

Objective 5: Choose the correct word or phrase to complete statements about diseases and disorders of the cervix and uterus.

- Have students share relevant experiences about friends or family members who have problems related to diseases and disorders of the cervix and uterus.

- Have students share ideas that might be helpful in evaluating diseases and disorders of the cervix and uterus.

- Stress supportive care for patients.

- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the cervix and uterus.

Objective 6: Choose the correct word or phrase to complete statements about diseases and disorders affecting the ovaries and fallopian tubes.

- Have students share relevant experiences about friends or family members who have problems related to diseases and disorders of the ovaries and fallopian tubes.

- Have students share ideas that might be helpful in evaluating diseases and disorders of the ovaries and fallopian tubes.

- Discuss ways in which nurses can improve the care of patients with diseases and disorders affecting the ovaries and fallopian tubes.

Objective 7: Choose the correct word or phrase to complete statements about diseases and disorders of the breast.

- Have students share relevant experiences about friends or family members who have problems related to diseases and disorders of the breast.

- Have students share ideas that might be helpful in evaluating diseases and disorders of the breast.

- Have students complete the Assignment Sheet.

- Teach breast self-examination.

- Invite a radiologist to speak on mammography.

- Invite a speaker from Reach to Recovery.

- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the breast.

Objective 8: Choose the correct word or phrase to complete statements about surgical interventions affecting the female reproductive system.

- Have students share relevant experiences about friends or family members who have had surgery affecting the female reproductive system.

- Stress supportive care and communication techniques.

- Discuss ways in which nurses can improve the care of patients having surgery of the reproductive system.

Objective 9: Choose the correct word or phrase to complete statements about common diseases and disorders of the male reproductive system.

- Have students share relevant experiences about friends or family members who have problems related to common diseases and disorders of male reproductive system.

- Have students share ideas that might be helpful in evaluating diseases and disorders of the male reproductive system.

- Discuss ways in which nurses can improve the care of patients with common diseases and disorders of the male reproductive system.

- Teach testicular self-examination.

Objective 10: Choose the correct word or phrase to complete statements about sexually transmitted diseases.

- Have students share relevant experiences about friends or family members who have problems related to sexually transmitted diseases.

- Have students share ideas that might be helpful in evaluating sexually transmitted diseases.

- Stress the ethical aspects of working with populations that may create an ethical conflict for the nurse.

- Obtain and discuss current statistics regarding sexually transmitted diseases nationally and in your area.

- Discuss ways in which nurses can improve the care of patients with sexually transmitted diseases.

Objective 11: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the reproductive system.

- Have students share relevant experiences about friends or family members who have problems related to pediatric diseases and disorders of the reproductive system.

- Have students share ideas that might be helpful in evaluating pediatric diseases and disorders of the reproductive system.

- Discuss ways in which nurses can improve the care of patients with pediatric diseases and disorders of the reproductive system.

APPLICATION

- Make a video or skit having to do with patient care of a person with problems associated with the reproductive system. Either the students or the teachers can be the presenters.
- Students can practice care of the patient with problems associated with this unit.
- Have students present a one-minute speech on care of a patient with problems associated with the reproductive system.

Objective 12: Plan care for a patient with disorders of the reproductive system. (Assignment Sheet)

- Use the Assignment Sheet to give students an opportunity to practice ideas that help when they care for a patient with diseases and disorders of the reproductive system.
- Provide a care plan form for students' use.

EVALUATION

Pretest

- Give Written Test as pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Assignment Sheet

- Evaluate students on Assignment Sheet activities. Students must repeat an Assignment Sheet until they have mastered the activity.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.
- Complete appropriate sections of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.
- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *University of California Berkeley Wellness Letter*, 48 Shattuck Square, Suite 43, Berkeley, CA 94704-1140.

UNIT REFERENCES

- Betz, Cecily Lynn, and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St. Louis: Mosby-Year Book, Inc., 1991.
- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.
- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.

- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.

- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.

- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C.V. Mosby Company, 1990.

OBJECTIVE 1

Match terms associated with diseases and disorders of the reproductive system to their correct definitions.

- **adhesions** — Tissue produced by injury or inflammation that holds structures together
- **circumcision** — Surgical excision of the foreskin of the penis
- **climacteric period** — Transition time during which a woman's reproductive function gradually decreases and stops
- **dyspareunia** — Painful sexual intercourse
- **leukorrhea** — Thick yellowish or white vaginal discharge
- **menopause** — The period of time in a women's life when menstrual flow stops and the ovaries cease to function, usually occurring between the ages of 48 and 55
- **nulliparity** — Never having given birth
- **oophoritis** — Inflammation of the ovaries
- **salpingitis** — Inflammation of the fallopian tubes

OBJECTIVE 2

Choose the correct word or phrase to complete statements about common menstrual disorders.

Description and etiology

Dysmenorrhea — Painful menstrual periods. Uterine spasms cause cramping of the lower abdomen. Primary dysmenorrhea usually begins before age 20 and disappears in the mid- to late twenties or after pregnancy. Secondary dysmenorrhea usually begins in women over age 20.

Causes

- Endometriosis
- Pelvic infection
- Intrauterine devices (IUD)
- Cervical stenosis

Health care management

- Treat underlying cause
- Avoid constipation

- Apply heat to reduce pain
- Medications: analgesics, prostaglandin inhibitors, oral contraceptives
- Surgeries: dilation

ASSESSMENT

Dysmenorrhea

Signs and symptoms

- Colicky, cramping abdominal pain that occurs with the onset of menses or up to 2 days before onset
- Back pain

Description and etiology

Premenstrual tension syndrome (PMS) — A disorder associated with a variety of symptoms. Symptoms occur a few days before menstrual flow starts, then subside a few days after menses begins.

Causes

- Hormone imbalance

Health care management

- Emotional support
- Encourage patients to keep a diary of symptoms: symptoms must appear for three consecutive cycles for a positive diagnosis
- Restrict sodium, sugar, alcohol, nicotine, and caffeine intake
- Increase intake of green leafy vegetables, complex carbohydrates, whole-grain foods, protein
- Medications: analgesics, diuretics, progesterone

ASSESSMENT

Premenstrual tension syndrome

Signs and symptoms

- Anxiety
- Irritability
- Fluid retention
- Depression
- Headache
- Lethargy
- Sleep disturbances

	• Back pain
Description and etiology	**Amenorrhea** — Absence or abnormal stoppage of menses. Amenorrhea may be primary (menarche does not occur by age 18) or secondary (absence of menstruation for at least 3 months).
Causes	• Pregnancy • Menopause • Diabetes • Malnutrition or eating disorder • Obesity • Recent discontinuation of oral contraceptives • Regular, vigorous exercise • Tumor
Health care management	• Rule out pregnancy or menopause • Treat underlying cause
ASSESSMENT	**Signs and symptoms**
Amenorrhea	• Lack of menarche by age 18 • Period of three months or longer without menses
Description and etiology	**Menorrhagia** — Prolonged and excessive bleeding during menstrual flow.
Causes	• Tumor • Pelvic inflammatory disease • Endocrine disturbance
Health care management	• Treat underlying cause

ASSESSMENT	**Signs and symptoms**
Menorrhagia	- Excessive menstrual bleeding
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

MENSTRUAL DISORDERS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Manage pain • Provide adequate fluid and nutrition • Encourage bed rest • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan – Discuss pain relief measures – Emphasize the need for adequate nutrition and fluid intake – Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
OBJECTIVE 3	**Choose the correct word or phrase to complete statements about infertility.**
Description and etiology	**Infertility** – Inability or decreased ability to conceive. Couples who have never conceived have *primary infertility*. *Secondary infertility* is used to describe couples who have conceived in the past but cannot presently conceive.

Causes

- Hormonal deficiencies
- Obstructions
- Diseases of uterus or testes
- Pelvic inflammatory disease
- Undescended testes

Health care management

- Treat underlying condition
- Alternative methods of conception (artificial insemination, in vitro fertilization)

ASSESSMENT

Signs and symptoms

Infertility

- Inability to conceive after 12 months of unprotected intercourse

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

INFERTILITY

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions
Check medication record	
Collect equipment	
Promote healing	Provide emotional support Assist with diagnostic procedures Assist with alternate fertilization methods
Continually monitor patient's condition	
Plan for patient's discharge	Prepare teaching plan — Help patients contact support groups — Encourage patients to explore all options

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 4 **Choose the correct word or phrase to complete statements about diseases and disorders of the external genitalia and vagina.**

Description and etiology

Vulvitis — Inflammation of the vulva.

Causes

- Bacterial infection
- Fungal infection
- Herpes simplex
- Poor hygiene
- External irritants (such as bubble bath or toilet paper with perfumes or dyes)

Health care management

- Bed rest
- Sitz baths
- Treat underlying cause
- Teach proper hygiene techniques
- Sexual partners may need treatment to prevent reinfection
- Medications: antibiotics, antifungal agents, analgesics

ASSESSMENT

Signs and symptoms

Vulvitis

- Pruritus
- Burning pain
- Dyspareunia

Description and etiology

Vaginitis — Inflammation of the vagina.

Causes

- Bacterial infection
- Fungal infection
- External irritants
- Neoplasm

- Atrophy of vaginal mucosa
- Poor hygiene
- Diabetes

Health care management

- Bed rest
- Teach proper hygiene techniques
- Treat underlying cause
- Sexual partners may need treatment to prevent reinfection
- Women with repeated inflammation should be assessed for diabetes
- Medications: antibiotics, antifungal agents, analgesics

ASSESSMENT

Vaginitis

Signs and symptoms

- Vaginal discharge
- Pruritus
- Dyspareunia

Description and etiology

Vulvovaginitis — Inflammation of the vulva and vagina. Women with diabetes are particularly susceptible.

Causes

- Same as vulvitis and vaginitis

Health care management

- Same as vulvitis and vaginitis

ASSESSMENT

Vulvovaginitis

Signs and symptoms

- Same as vulvitis and vaginitis

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

VULVULAR AND VAGINAL INFLAMMATIONS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Keep perineal area clean
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan – Teach good perineal hygiene – Instruct patient on how and when to use medication – Patients should avoid intercourse or have partner wear a condom until treatment is completed – Multiple sex partners increase the risk of infection – Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Vaginal fistula — Abnormal tube-like passage from the vagina to a free surface or another cavity (rectum, bladder, or urethra).

Causes

- Trauma
- Radiation
- Surgery
- Malignancy

Health care management	• Keep perineal area clean and dry • Use pads or protective pants for dribbling of urine or fecal material • Surgeries: fistulectomy
ASSESSMENT	**Signs and symptoms**
Vaginal fistula	• Dribbling of urine or feces from vagina • Escape of flatus from vagina
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

VAGINAL FISTULA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Encourage adequate fluid intake • Keep perineal area clean
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Explain that fistulas often reoccur – Emphasize the need to keep the perineal area clean – Discuss temporary methods of reducing discharge and/or odor

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology

Cystocele and rectocele — Weak supporting pelvic muscles allow downward protrusion of a structure into the vaginal wall. *Cystocele* is a herniation of the bladder into the vaginal wall. *Rectocele* is a herniation of the rectum into the vaginal wall.

Causes

- Repeated, closely-spaced pregnancies
- Childbirth injuries
- Congenital displacement

Health care management

- Kegel exercises may prevent muscle relaxation
- A plastic pessary may be inserted to temporarily hold the pelvic structures in place
- Surgeries: anterior colporrhaphy (vaginal repair), posterior colpoplasty (rectal repair) A and P repair (vaginal and rectal repair)

ASSESSMENT

Signs and symptoms

Cystocele and rectocele

- Cystocele
    - Urgency
    - Incontinence or stress incontinence
    - Urinary frequency
    - Pain in back of pelvis
- Rectocele
    - Incontinence
    - Constipation
    - Hemorrhoids
    - Difficulty in defecating

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CYSTOCELE and RECTOCELE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Keep perineal area clean and dry
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Instruct patient to use protective pads or plastic undergarments for incontinence

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about diseases and disorders of the cervix and uterus.

Description and etiology

Cervicitis — Acute or chronic inflammation of the cervix. Cervicitis is a very common disorder that can present very mild symptoms and may be left untreated. Untreated acute cervicitis often becomes chronic.

Causes

- Trauma
- Infection
- Childbirth injuries
- Cervical erosion

Health care management

- Treatment depends on the causative organism

- Many cases can be prevented with adequate follow-up care after childbirth
- Medications: antibiotics, antifungal agents
- Surgeries: cauterization

ASSESSMENT	**Signs and symptoms**
Cervicitis	• Mucopurulent cervical discharge • Reddened, edematous cervix • Bleeding between menses or after intercourse • Cervical erosion • Abdominal pain
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

CERVICITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Patients should avoid intercourse or douching until approved by physician – Instruct patient how and when to use medications – Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Cervical cancer — Abnormal cells that grow and spread on the neck of the uterus. Initially, cells are confined to the epithelial layer, but they will spread to surrounding structures. If detected early, cervical cancer is easily cured.

Risk factors

- Multiple sex partners
- Beginning sexual activity at an early age
- Genital herpes
- Low socioeconomic status

Health care management

- All women should be encouraged to have regular gynecological examinations, especially those in high risk groups
- Emotional support
- Radiation therapy
- Surgeries: conization, cauterization, hysterectomy
- Complications: anemia

ASSESSMENT

Cervical cancer

Signs and symptoms

- Leukorrhea
- Bleeding between menses or after intercourse
- Pain in back, upper thighs, and legs (late stages)
- Weight loss and malaise (late stages)

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CERVICAL CANCER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide care for patient receiving radiation therapy • Provide pain relief • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss symptoms that should be reported to physician – Stress the need for regular follow-up care – Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Prolapse of the uterus — Herniation of the uterus into the vagina due to weak supporting pelvic muscles. The degree of prolapse can range from a minor displacement to *procidentia* (the uterus, vaginal wall, rectum, and bladder protrude beyond the vulva).

Causes

- Same as cystocele and rectocele

Health care management

- A plastic pessary may be inserted temporarily to hold pelvic structures in place.
- Surgeries: hysterectomy

ASSESSMENT	**Signs and symptoms**
Prolapse of the uterus	• Dysmenorrhea • Leukorrhea • Back pain • Sensation of bearing down • Urinary incontinence • Constipation
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

PROLAPSE of the UTERUS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide supportive care • Provide pain relief
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.

Description and etiology

Uterine cancer (cancer of the endometrium) — Abnormal cells that grow and spread in the uterine lining (endometrium). They spread to the cervix, fallopian tubes, ovaries, bladder, and rectum.

Risk factors

- Age 50 or older
- Late menopause
- Obesity
- Use of estrogen without progestin
- Diabetes mellitus
- Hypertension
- Nulliparity

Health care management

- Chemotherapy
- Radiation therapy
- Hormone therapy
- Surgeries: hysterectomy with salpingo-oophorectomy

ASSESSMENT

Signs and symptoms

Uterine cancer

- Abnormal bleeding
- Abdominal pain (late stages)
- Enlarged uterus (late stages)

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

UTERINE CANCER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Provide care for patient receiving radiation therapy or chemotherapy • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Emphasize the need for regular follow-up care – Discuss symptoms that should be reported to physician – Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Endometriosis — Endometrial cells grow outside the uterus. During menses, hormone stimulation causes these cells to bleed, leading to inflammation in surrounding tissue.

Causes

- Unknown

Health care management

- Women with endometriosis who plan to have children should begin their families as soon as possible
- Prevent ovulation
- Medications: oral contraceptives, antigonadotropics, analgesics
- Surgeries: hysterectomy, oophorectomy, salpingectomy, resection, endometrial ablation

- Complications: adhesions, bladder dysfunction, bowel strictures, sterility

ASSESSMENT

Endometriosis

Signs and symptoms

- Severe pain that begins after onset of menses and increases during period
- Dyspareunia
- Menorrhagia
- Irregular menstrual cycles

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ENDOMETRIOSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Administer medications • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss symptoms that should be reported to physician – Discuss family planning – Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Fibroid tumors (myomas) — Benign, fibrous, connective tissue growths that develop slowly and usually remain encapsulated. The symptoms are related to the size and location of the tumor. Tumors usually disappear after menopause.

Causes

- Unknown

Health care management

- Treatment depends on the patient's age, symptoms, and desire to have children
- Small tumors may be left untreated and closely observed
- Radiation therapy may be used on women who are nearing menopause or are unable to undergo surgery
- Surgeries: myomectomy, hysterectomy

ASSESSMENT

Signs and symptoms

Fibroid tumors

- Menorrhagia
- Dysmenorrhea
- Back pain
- Pressure in low abdominal area
- Enlarged uterus
- Vaginal bleeding

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

FIBROID TUMORS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide care for patient receiving radiation therapy • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Stress the importance of follow-up care, especially if the patient did not have a hysterectomy – Discuss symptoms that should be reported to the physician – Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about diseases and disorders affecting the ovaries and fallopian tubes.

Description and etiology

Dermoid cyst — A closed sac with a well-defined wall in or on the ovary. It contains ectodermic material such as skin, hair, or teeth. Symptoms are related to the size of the cyst, and are absent until it is large enough to cause pressure. Cysts are benign tumors that can become malignant tumors.

Causes

- Unknown

Health care management

- Dermoid cysts are often asymptomatic, but should be removed because they can become malignant
- Surgeries: dermoidectomy

ASSESSMENT	**Signs and symptoms**
Dermoid cyst	• Menstrual abnormalities • Vaginal bleeding • Palpable mass

Description and etiology	**Bartholin cyst** — Scar tissue left after inflammation and abscess of the bartholin gland.
Causes	• Infection of the bartholin gland
Health care management	• Incision and drainage of the cyst
ASSESSMENT	**Signs and symptoms**
Bartholin cyst	• Palpable, mobile cyst
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

DERMOID CYST and BARTHOLIN CYST

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Ovarian cancer — Abnormal cells grow and spread from the ovaries to adjacent structures. Symptoms usually do not appear until the late stages. Metastasis often occurs before treatment can be initiated; therefore, a cure is difficult to achieve.

Risk factors

- Infertility
- Nulliparity
- History of spontaneous abortion

Health care management

- Emotional support
- Radiation therapy
- Chemotherapy
- Surgeries: hysterectomy with salpingo-oophorectomy

ASSESSMENT

Ovarian cancer

Signs and symptoms

- Abdominal discomfort and pressure
- Constipation
- Enlargement of abdomen
- Nausea and vomiting
- Frequency

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

OVARIAN CANCER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide care for patient receiving radiation therapy or chemotherapy • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss symptoms that should be reported to physician – Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Pelvic inflammatory disease (PID) — Inflammation of the pelvic organs that involves the tubes, ovaries, uterus, and pelvic tissue. PID begins as an acute or chronic salpingitis or oophoritis that spreads into the pelvic structures. Treatment and symptoms will vary according to the causative organism. Organisms can enter during intercourse, surgery, or childbirth. Women who use IUDs or have multiple partners are at high risk.

Causes

- Streptococcal, staphylococcal, gonococcal, chlamydial, or trachomatous infection

Health care management

- Control infection
- Increased fluid intake
- Bed rest

- Apply heat to abdomen to improve circulation and reduce pain
- Medications: analgesics, antibiotics
- Surgeries: salpingectomy, hysterectomy with salpingo-oophorectomy
- Complications: adhesions, infertility

ASSESSMENT — **Signs and symptoms**

Pelvic inflammatory disease

- Fever and chills
- Abdominal pain, pressure, or fullness
- Malaise
- Nausea and vomiting
- Foul, purulent vaginal exudate
- Dyspareunia
- Bleeding between menses

ANALYSIS — Report findings to RN who will assimilate information for analysis and nursing care.

PELVIC INFLAMMATORY DISEASE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Encourage increased fluid intake • Apply heat to abdomen • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications

- Plan for patient's discharge
  - Prepare teaching plan
    - Discuss symptoms that should be reported to physician
    - Patients should practice meticulous personal hygiene and avoid using tampons
    - Sexual partners should be examined and treated to avoid reinfection
    - Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Toxic shock syndrome (TSS) — Severe, acute, systemic infection. TSS is seen primarily in women who are menstruating and use tampons, especially women who use high-absorbency tampons or insert the tampons with their fingers. TSS has also been diagnosed in non-menstruating women, as well as men and children.

Causes

- *Staphylococcus aureus* bacteria

Health care management

- Prevention is important
- Supportive care
- Bed rest
- Maintain fluid balance
- Prevent complications
- Medications: antibiotics

ASSESSMENT

Toxic shock syndrome

Signs and symptoms

- Fever
- Vomiting
- Diarrhea
- Erythematous rash, especially on palms and soles

- Hypotension
- Headache
- Sore throat
- Myalgia
- Fatigue

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

TOXIC SHOCK SYNDROME

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Encourage bed rest • Check for tampon use, remove tampon
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Women who have had TSS should not use tampons; if they do use tampons, they should use applicators instead of their fingers to insert the tampon and change tampons every 4 hours – Stress the need for scrupulous personal hygiene – Women who have had TSS and use a diaphragm should never use the diaphragm for more than 24 hours at one time

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 7

Choose the correct word or phrase to complete statements about diseases and disorders of the breast.

Description and etiology

Acute mastitis — Inflammation of the breast from a bacterial organism. Acute mastitis usually occurs in women who are lactating.

Causes

- Infection from nursing infant
- Nipple fissure
- Poor hygiene

Health care management

- Apply heat for abscesses
- Use cold packs to decrease pain
- Encourage woman to wear supportive, properly fitting brassiere
- Patient should stop breastfeeding if abscesses are present
- Medications: antibiotics, analgesics
- Complications: abscesses

ASSESSMENT

Signs and symptoms

Acute mastitis

- Fever
- Tender, engorged breasts

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ACUTE MASTITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Apply cold or warm packs to breasts • Administer medications
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Encourage proper hygiene (teach proper hygiene, if necessary) – Review breastfeeding technique

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Fibrocystic breast disease — Cyclic hyperplasia that causes benign tumors in the breast. The tumors may be unilateral, but are usually bilateral.

Causes

- Unknown

Health care management

- Patients have a higher risk of breast cancer and should receive yearly mammograms
- Apply heat or cold to reduce pain
- Avoiding coffee, tea, chocolate, and cola helps some patients
- Medications: analgesics

ASSESSMENT	**Signs and symptoms**
Fibrocystic breast disease	- Palpable mass in breast – Usually bilateral – Usually moveable – Tender or painful - Pain may increase with onset of menses - Bilateral clear, greenish, or brownish discharge
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

FIBROCYSTIC BREAST DISEASE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Apply warm or cold packs
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Emphasize the importance of yearly mammograms – Encourage patient to wear a supportive, well-fitting brassiere – Teach patient to do regular breast self examinations – Encourage patient to experiment by eliminating coffee, tea, chocolate, and cola from her diet

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Breast cancer — Breast cancer is the most common type of cancer in American women. Breast cancer may also occur in males.

Risk factors

- Mother or sister with breast cancer
- Early menarche or late menopause
- Over 40 years of age
- Nulliparity or birth of first child after age 30
- History of fibrocystic breast disease, radiation exposure, or previous breast cancer
- High-fat diet

Health care management

- Emotional support
- Radiation therapy
- Chemotherapy
- Surgeries: lumpectomy, mastectomy, breast reconstruction
- Complications: lymphedema

ASSESSMENT

Signs and symptoms

Breast cancer

- Palpable mass in breast
  - Usually unilateral
  - Irregular shape
  - Firm and nonmoveable
  - May be painless or painful
- "Orange peel" skin (late stages)
- Bloody or serous nipple discharge
- Retracted nipple
- Asymmetry of breasts

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

BREAST CANCER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide care for patient receiving chemotherapy or radiation therapy • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Teach woman to do regular breast self examinations – Post-mastectomy patients should wear a medical alert bracelet or necklace – Emphasize the need to avoid injury to the arm on the affected side – Teach post-mastectomy exercises – Help patient contact support groups – Discuss prostheses and/or reconstruction

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 8

Choose the correct word or phrase to complete statements about surgical interventions affecting the female reproductive system.

- Obtain a completed informed consent prior to surgery.

  NOTE: When checking the preoperative orders, make sure that the correct and entire surgical procedure appears in the appropriate places.

- Provide emotional support for patients and families throughout illness.

- Evaluate patient's and family's knowledge of the surgical procedure and answer questions.
- Provide pre- and postoperative care for patients who receive surgical removal of affected organs.

  NOTE: The removal of organs depends on the extensiveness of the condition. A variety of surgical procedures may be needed to remove the diseased tissues.

- Take vital signs as ordered.

  NOTE: Do not use the arm on the affected side if the patient has had a mastectomy. This may lead to an incorrect reading or cause trauma to the arm.

- Check surgical dressing and gravity-flow drainage container to assess bleeding and drainage.

  NOTE: Drainage following surgery is usually normal. Assess the type and amount of drainage, and observe for symptoms of hemorrhage.

- Maintain safe environment for patient, family, and nurse if radiation implants are used in treatment.
- Assist patients with turning and deep breathing.
- Give emotional support to patients coping with changes in body image.

  NOTE: Patients may need some guidance or counseling if surgical removal of reproductive organs is seen as negative.

- Administer medications as ordered.

  NOTE: Do not use the arm on the affected side for injections of any kind if the patient has a mastectomy. Trauma and open wounds may result in edema or infection.

- Encourage healthy regimen, including good diet, adequate rest, and exercise as allowed.
- Instruct patients and families in home care and follow-up, and direct them to local support agencies.

OBJECTIVE 9 **Choose the correct word or phrase to complete statements about common diseases and disorders of the male reproductive system.**

Description and etiology **Orchitis** — Inflammation of the testes. One or both testes may be affected. Bilateral orchitis may result in sterility.

Causes

- Infection (may appear after mumps or tuberculosis)
- Trauma

Health care management

- Bed rest
- Support of scrotum
- Ice compresses
- Medications: antibiotics, analgesics

ASSESSMENT **Signs and symptoms**

Orchitis

- Sudden, severe pain in scrotal area
- Edema
- Chills and fever
- Pus in urine

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

ORCHITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Encourage fluid intake • Provide warm sitz baths or ice compresses • Maintain bed rest • Obtain urine specimen • Provide peri care if patient has catheter
• Continually monitor patient's condition	• Monitor vital signs, I/O
• Plan for patient's discharge	• Prepare teaching plan – Emphasize adequate fluid intake and good perineal hygiene – Sexual partners may also be infected

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Phimosis** – Congenital stenosis or constriction of the foreskin that prevents it from being pushed back to its normal position.
Causes	• Unknown
Health care management	• Surgeries: circumcision
ASSESSMENT	**Signs and symptoms**
Phimosis	• Narrow, retracted foreskin • Edema

ANALYSIS | Report findings to RN who will assimilate information for analysis and nursing care.

PHIMOSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Keep area clean and dry
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology **Hydrocele** — Collection of fluid in the tissues enclosing the testicle.

Causes

- Trauma
- Orchitis
- Epididymitis

Health care management

- Bed rest
- Cold packs to relieve pain
- Scrotal support

- Aspiration of fluid
- Medications: analgesics
- Surgeries: hydrocelectomy

ASSESSMENT

Hydrocele

Signs and symptoms

- Swelling of scrotum
- Pain

Description and etiology

Varicocele — Abnormal dilation of veins in the scrotum, often associated with infertility. The left testis is commonly affected because of the longer length of the left spermatic vein.

Causes

- Unknown

Health care

- Bed rest
- Scrotal support
- Medications: analgesics
- Surgeries: ligation of spermatic vein

ASSESSMENT

Varicocele

Signs and symptoms

- Dragging or pulling sensation
- Dull pain
- Scrotal edema

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

HYDROCELE and VARICOCELE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Administer medications • Apply cold • Provide support to scrotal area
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Patients should continue to wear scrotal support until otherwise directed – Discuss symptoms that should be reported to physician – Avoid strenuous exercise or exertion until approved by physician

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Testicular cancer — Malignant growth in the testis that usually occurs in males between the ages of 25 and 35. Testicular self-examination (TSE) is an important factor in the survival rate; early detection brings a greater chance of survival.

Risk factors

- Cryptorchidism
- Familial tendency
- Trauma to scrotum
- Developmental defects

Health care management

- Emotional support
- Radiation therapy
- Chemotherapy
- Surgeries: orchiectomy

ASSESSMENT **Signs and symptoms**

Testicular cancer

- Palpable lump in testis
- Swelling of testis
- Pulling or dragging sensation

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

TESTICULAR CANCER

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide emotional support • Provide care for patient receiving chemotherapy or radiation therapy
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Assure the patient that removal of one testis will not make him sterile or impotent – Discuss symptoms that should be reported to physician – Teach the patient to perform TSE – Help patient contact support groups – Stress the importance of regular follow-up care

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 10

Choose the correct word or phrase to complete statements about sexually transmitted diseases.

Description and etiology

Gonorrhea — Bacterial infection of the mucous membranes. Gonorrhea can affect the pharynx, eyes, and rectum, as well as the genital organs. If untreated, gonorrhea can cause chronic systemic complications such as PID in women and prostatitis or epididymitis in men. Nicknames for gonorrhea include "the clap" and "GC".

Causes

- *Neisseria gonorrhoea* bacteria

Health care management

- Notify public health authorities
- Encourage patient to notify sexual contacts; stress that this is for their own protection and not a "punishment"
- Prevent spread of infection
- Discuss ways to prevent future infections
- Recommend sitz baths for discomfort
- Medications: antibiotics
- Complications: PID, orchitis, epididymitis, prostatitis, cystitis, arthritis, endocarditis, ophthalmia neonatorum

ASSESSMENT

Gonorrhea

Signs and symptoms

- Most women and some men are asymptomatic
- Urethritis
- Purulent discharge
- Edema
- Pain on urination or defecation
- Sore throat
- Fever

Description and etiology

Syphilis — Acute and chronic contagious infection that appears in four stages. The primary stage is characterized by a painless ulceration, or *chancre*, at the site of invasion (usually the anogenital area, mouth, or fingers). The exudate from this chancre is extremely contagious. A skin rash appears in the secondary stage, disappearing after a few weeks. The exudate from these lesions is also contagious. Untreated syphilis then enters the latent stage and becomes dormant. Syphilis is still contagious in the first 2 years of the latent stage, and may be transmitted in utero throughout the latent stage. Years later, in the tertiary stage, the dormant spirochetes exacerbate and destroy tissue.

Causes

- *Treponema pallidus* spirochete

Health care management

- Notify public health authorities
- Encourage patient to notify sexual contacts; stress that this is for their own protection and not a "punishment"
- Prevent spread of infection
- Discuss ways to prevent future infections
- Medications: antibiotics
- Complications: congenital syphilis, cardiovascular damage, neurosyphilis, paralysis, meningitis, dementia

ASSESSMENT

Syphilis

Signs and symptoms

- Primary stage
  - Hard, painless, ulcerating sore

    NOTE: Women are usually asymptomatic
- Secondary stage
  - Maculopapular rash
  - Low-grade fever
  - Headache
  - Sore throat
  - Body aches
  - Anorexia
- Latent stage
  - Asymptomatic
- Tertiary stage
  - Tumorlike lesions, may appear anywhere in body
  - Dementia

- Lack of coordination
- Confusion

Description and etiology

Chlamydia — A contagious, nongonococcal genital infection. Chlamydia is the most common sexually transmitted disease in America.

Causes

- *Chlamydia trachomatous*

Health care management

- Test patients for gonorrhea; many chlamydia patients have concurrent gonorrheal infections
- Encourage patient to notify sexual contacts; stress that this is for their own protection and not a "punishment"
- Prevent spread of infection
- Discuss ways to prevent future infections
- Medications: antibiotics
- Complications: sterility, salpingitis, ectopic pregnancy, endometritis, prostatitis

ASSESSMENT

Chlamydia

Signs and symptoms

- Dysuria
- Urethritis
- Epididymitis
- Frequency

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

GONORRHEA, SYPHILIS, and CHLAMYDIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Prevent complications • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Stress that the patient must take all medication, even if symptoms disappear – Emphasize the need to avoid spreading the disease to others – Discuss ways to reduce the chance of contacting STDs – Discuss symptoms that should be reported to the physician – Advise female patients to avoid douching

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Herpes genitalis — Two similar strains of the herpes simplex virus cause two different conditions. Type 2 is spread by sexual contact and causes lesions in the genital area. Herpes can be treated, but no cure is currently available.

Causes

- *Herpes hominis* virus (also known as herpes simplex virus or HSV)

Health care management	• Symptomatic relief • Patient education to prevent spreading virus to others • Medications: acyclovir, analgesics • Complications: cervical cancer
ASSESSMENT	**Signs and symptoms**
Herpes genitalis	• Vesicles, burning pain, itching in the genital area • Malaise • Edema of surrounding area that may cause difficulty or pain when urinating
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

HERPES GENITALIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide symptomatic relief • Keep lesions dry
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss methods to avoid infecting sexual partners (the patient is only contagious during an outbreak) — Genital herpes can be transmitted from mother to baby during vaginal delivery; cesarean delivery may be indicated for pregnant women with herpes

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 11

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the reproductive system.

Description and etiology

Cryptorchidism (undescended testes) – Failure of one or both testes to descend into the scrotum.

Causes

- Delayed descent
- Lesions
- Endocrine disorder

Health care management

- Administration of chorionic gonadotropin may cause testes to descend without surgery
- Surgery is usually performed by the time the child is five years old
- Patients are at a higher risk of testicular cancer and should perform regular self-examinations
- Delaying surgery until puberty may result in sterility; sperm-producing cells are killed by the higher body temperatures in the abdominal cavity
- Surgeries: orchiopexy

ASSESSMENT

Signs and symptoms

Cryptorchidism

- Absence of one or both testes in scrotum

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CRYPTORCHIDISM

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide emotional support for parents and child • Emphasize to older children that they did not do anything "wrong" or "bad" to cause condition
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Emphasize that patient's condition and surgery will not cause sterility if other testicle is normal – Teach patient and/or parent to perform regular testicular examination

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

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DIAGNOSTIC PROCEDURES

Dilatation and curettage (D&C) — Both a diagnostic and therapeutic procedure that involves dilating the cervix to scrape the lining of the uterus

Laboratory studies:

- **Culture** — Blood cells are collected from the patient, grown in a nutrient medium, and assessed for the presence of a suspected organism, such as a sexually transmitted disease
- **Thyroid function tests** — Rule out menstrual abnormalities related to thyroid gland disfunction
- **Adrenal function tests** — Rule out menstrual abnormalities related to adrenal gland dysfunction
- **Follicle-stimulating hormone tests** — Evaluate the level of estrogen secretion
- **Luteinizing hormone tests** — Evaluate the level of progesterone secretion.
- **Schiller's test** — Involves the application of a dye to the cervix cells to determine if a malignancy is present – malignant cells will not absorb the dye and will be "outlined"

Laparoscopy — Allows the physician to visualize the pelvic structures through the abdominal wall with a lighted scope

Papanicolaou smear test (pap smear) — Often performed with a pelvic examination. The physician takes a sample of the cervical cells for laboratory examination

Ultrasonography — Reproduces an image of the pelvic structures using a sound frequency

Mammography — A radiographic visualization of the breast to detect any abnormality

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SURGICAL PROCEDURES

A and P repair — Anterior colporrhaphy and posterior colpoplasty

Anterior colporrhaphy — Suturing the vagina to repair torn tissue

Breast reconstruction (mammoplasty) — Reconstruction of the breast using prosthetic implants or flaps constructed of the patient's own tissue

Cauterization – Use of an electric current to remove tissue and control bleeding.

Conization — The removal of a cone of tissue from the cervix

Dermoidectomy – Removal of a dermoid cyst

Endometrial ablation — Using a laser to remove the endometrium

Fistulectomy – Removal of a fistula

Hydrocelectomy – Excision of the tunica vaginalis (membrane surrounding the testicle)

Hysterectomy — Removing the uterus, either vaginally or abdominally

Ligation – Applying a ligature to a blood vessel

Lumpectomy – Removal of a tumor in the breast, leaving the breast intact

Mastectomy — The removal of one or both breasts

- **Partial mastectomy (quadrantectomy)** – Removal of a wedge of breast tissue
- **Subcutaneous mastectomy** – Breast tissue is removed but the skin and nipple are left in place for later breast implant
- **Simple mastectomy** – Removal of the entire breast
- **Modified radical mastectomy** – Removal of all breast tissue, skin, nipple, and pectoralis minor; lymph nodes may also be removed

- **Radical mastectomy** – Removal of all breast tissue, skin, nipple, pectoralis minor, pectoralis major, lymph nodes, fat, and fascia (rarely performed)

Myomectomy – Removal of a myomatous tumor (such as a uterine tumor)

Orchiectomy – Removal of a testis

Posterior colpoplasty – Surgical repair of the vagina

Salpingo-oophorectomy – Removal of one or both ovaries and fallopian tubes

ASSIGNMENT SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE REPRODUCTIVE SYSTEM

XII

Name ______________________________ Score ________

OBJECTIVE 11 **Plan care for a patient with disorders of the reproductive system.**

INTRODUCTION

Surgical treatment for breast cancer involves the removal of all or part of the breast. It may be followed with radiation or chemotherapy. The amount of breast and surrounding tissue that is removed depends on the size and location of the tumor, how much the cancer has spread, and the patient's age and health. The patient and doctor will decide on the final treatment.

Surgeons often recommend a lumpectomy or a quadrantectomy. For a lumpectomy or quadrantectomy, an incision is made over the breast lump and the tumor is removed. A mastectomy is necessary if the cancer has spread. Surgeons will leave the overlying skin intact or leave sufficient surrounding skin to allow for breast reconstruction. A mastectomy is performed under general anesthesia. For a simple mastectomy, an incision is made beside the breast, close to the lump. For a radical mastectomy, the incision begins at the armpit and encloses the entire breast. Patients go home two days after a lumpectomy or quadrantectomy, and can resume most activities within two weeks. After a mastectomy, the hospital stay is several days. Analgesics are necessary for the first week.

Patients with a lumpectomy or quadrantectomy heal without noticeable scarring. Scarring is extensive after radical surgery. Complications from a radical mastectomy include lymphedema and stiffness of the arm and shoulder. If the entire breast was removed, the woman can be fitted with a prosthesis. A temporary prosthesis can be worn until the incision has healed. Many women want to improve their appearance and have reconstructive surgery. A mammoplasty is a cosmetic operation to reconstruct the breast.

Breast removal for most women is an emotionally difficult decision and ordeal. They mourn the loss of a body part; and because society places much importance on a woman's physical appearance, their self-image and self-esteem suffers. The practical nurse's responsibility is to be knowledgeable, answer questions, and provide emotional support at every opportunity. Adjustment for these women is often difficult and they may require counseling. The practical nurse may teach post-mastectomy exercises. Instructing, helping, and encouraging the patient's progress during postoperative exercise are important to recovery.

Delila Moore is 48 years old. She has been diagnosed with breast cancer and is scheduled for a mastectomy tomorrow. She is frightened about her disease and worried that her husband will leave her after the operation.

DIRECTIONS

Use the above situation or a patient in your clinical practice to plan care for a patient. Care plans are essentially research projects for each of your patients. Use medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Use the information in Objectives 7 and 8 to help with planning care. Your instructor will provide a care plan form.

Nursing interventions include:

- Do a complete assessment
- Provide the correct diet and fluids as ordered
- Instruct patient to wear elastic stockings
- Monitor vital signs
- Monitor intake and output
- Administer analgesics as ordered
- Teach and provide personal care
- Provide emotional support to the patient and family
- Refer patients to appropriate support agencies such as Reach to Recovery
- Instruct and assist patients with postoperative exercises
- Check surgical dressing and drainage tube
- Assist patient in turning and deep breathing
- Place affected arm on a pillow to prevent edema
- Teach post-mastectomy exercises

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Use content area vocabulary

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Life Science
- Investigate/apply principles of human development
- Investigate/apply principles of anatomy/physiology
- Investigate health issues

Cognitive Activities
- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

ASSIGNMENT SHEET

Care plan should meet the following criteria:

- Nursing process followed
  - Assessment
  - Analysis (under direction of RN)
  - Planning
  - Implementation
  - Outcome/evaluation (under direction of RN)
- Problem stated appropriately
- Nursing actions/interventions include discharge planning
- Check that students include the following information:
  - Do a complete assessment
  - Provide the correct diet and fluids as ordered
  - Instruct patient to wear elastic stockings
  - Monitor vital signs
  - Monitor intake and output
  - Administer analgesics as ordered
  - Teach and provide personal care
  - Provide emotional support to the patient and family
  - Refer patients to appropriate support agencies such as Reach to Recovery
  - Instruct and assist patients with postoperative exercises
  - Check surgical dressing and drainage tube
  - Assist patient in turning and deep breathing
  - Place affected arm on a pillow to prevent edema
  - Teach post-mastectomy exercises

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE REPRODUCTIVE SYSTEM XII

NAME ______________________________ SCORE ______

OBJECTIVE 1

Match terms associated with diseases and disorders of the reproductive system to their definitions. Write the correct letter in the blank.

_____ 1. Transition time during which a woman's reproductive function gradually decreases and stops

_____ 2. Surgical excision of the foreskin of the penis

_____ 3. Injury or inflammation produces tissue that holds structures together

_____ 4. Thick yellowish or white vaginal discharge

_____ 5. The period of time in a women's life when menstrual flow stops and the ovaries cease to function, usually occurring between the ages of 48 and 55

_____ 6. Painful sexual intercourse

_____ 7. Inflammation of the ovaries

_____ 8. Never having given birth

_____ 9. Inflammation of the fallopian tubes

a. adhesions

b. circumcision

c. climacteric period

d. dyspareunia

e. leukorrhea

f. luteoma

g. menopause

h. nulliparity

i. multiparity

j. oophoritis

k. poulice

l. salpingitis

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OBJECTIVE 2 **Choose the correct word or phrase to complete statements about common menstrual disorders.** Write the correct letter in the blank.

_____ 1. Dysmenorrhea is defined as

a. absence or abnormal stoppage of menses
b. bleeding between menses
c. painful menstrual periods
d. prolonged and excessive bleeding during menstrual flow

_____ 2. Causes of dysmenorrhea include

a. endometriosis
b. hormone imbalance
c. obstruction
d. pregnancy

_____ 3. Patients with premenstrual tension syndrome (PMS) should restrict their intake of

a. complex carbohydrates
b. fats and cholesterol
c. protein and green vegetables
d. sugar, alcohol, and caffeine

_____ 4. For a positive diagnosis of premenstrual tension syndrome, patients must have symptoms for ___________ cycles

a. three consecutive
b. four out of five
c. two yearly
d. six consecutive

_____ 5. Secondary amenorrhea is defined as

a. menstruation during alternate cycles only
b. absence of menstruation for at least 3 months
c. menarche does not occur by age 18
d. scanty flow during menses

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_____ 6. Causes of amenorrhea include

a. endometriosis
b. IUD use
c. pelvic inflammatory disease
d. tumor

_____ 7. Menorrhagia is defined as

a. absence or abnormal stoppage of menses
b. bleeding between menses
c. painful menstrual periods
d. prolonged and excessive bleeding during menstrual flow

_____ 8. Causes of menorrhagia include

a. endometriosis
b. regular, vigorous exercise
c. pelvic inflammatory disease
d. malignancy

_____ 9. Health care management for patients with dysmenorrhea includes

a. endometrial ablation
b. hysterectomy
c. oral contraceptives
d. restrict nicotine and caffeine

_____ 10. Health care management for patients with amenorrhea includes

a. diuretics and analgesics
b. emotional support
c. increase intake of green leafy vegetables
d. rule out pregnancy or menopause

_____ 11. Health care management for patients with menorrhagia includes

a. diuretics and analgesics
b. avoid constipation
c. increase intake of green leafy vegetables
d. treat underlying cause

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_____ 12. The teaching plan for patients with menstrual disorders should include

a. emphasize the need to restrict fluids
b. discuss pain relief measures
c. discuss temporary methods of reducing discharge and/or odor
d. teach good perineal hygiene

OBJECTIVE 3

Choose the correct word or phrase to complete statements about infertility. Write the correct letter in the blank.

_____ 1. Secondary infertility describes a couple who

a. has never conceived a child
b. has conceived a child but cannot carry to term
c. has conceived a child in the past but cannot presently conceive
d. cannot conceive because of a disease or structural disorder

_____ 2. A couple is diagnosed with infertility if they do not conceive

a. with artificial insemination
b. after 12 months of unprotected intercourse
c. after six cycles of fertility drugs
d. after using at least two alternate fertilization methods

_____ 3. As part of the plan to promote healing for a patient with infertility, you would

a. assist with diagnostic procedures
b. provide pain relief
c. remind couples that anxiety can cause infertility
d. stress that the patient did not do anything "wrong" or "bad" to cause the condition

_____ 4. The teaching plan for patients with infertility should include

a. discuss symptoms that should be reported to the physician
b. emphasize the need for adequate nutrition and fluid intake
c. help patients contact support groups
d. patients should avoid intercourse or wear a condom until treatment is completed

May be photocopied for student use

OBJECTIVE 4

Choose the correct word or phrase to complete statements about diseases and disorders of the external genitalia and vagina. Write the correct letter in the blank.

_____ 1. Vulvitis may be caused by

a. malignancy
b. poor hygiene
c. radiation
d. viral infection

_____ 2. Health care management for patients with vulvitis includes

a. cauterization
b. Kegel exercises
c. sitz baths
d. vulvectomy

_____ 3. Vaginitis may be caused by

a. herpes simplex
b. external irritants
c. radiation
d. surgery

_____ 4. Signs and symptoms of vaginitis include

a. edema
b. fever and chills
c. bleeding between menses
d. vaginal discharge

_____ 5. ___________ women are especially susceptible to vulvovaginitis

a. diabetic
b. menopausal
c. obese
d. pregnant

_____ 6. The teaching plan for patients with inflammations of the vulva and vagina includes

a. avoid intercourse or have partner wear a condom until treatment is completed
b. discuss temporary methods of reducing discharge and/or odor
c. emphasize the need to keep the perineal area clean and dry
d. instruct patient to use protective pads or plastic undergarments for incontinence

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_____ 7. A vaginal fistula may be caused by

a. fungal infection
b. herpes simplex
c. poor hygiene
d. radiation

_____ 8. The teaching plan for patients with a vaginal fistula includes

a. avoid intercourse or have partner wear a condom until treatment is completed
b. emphasize the need to keep the perineal area clean
c. emphasize the need to prevent infection
d. instruct patient how and when to use medications

_____ 9. Cystocele or rectocele may be caused by

a. cervical erosion
b. chronic vaginitis
c. repeated, closely-spaced pregnancies
d. surgery or trauma

_____ 10. Signs and symptoms of cystocele include

a. urinary frequency
b. burning pain when urinating
c. mucopurulent cervical discharge
d. bleeding between menses

_____ 11. Signs and symptoms of rectocele include

a. abdominal pain
b. difficulty in defecating
c. flatulence
d. diarrhea

_____ 12. Signs and symptoms of vulvitis include

a. burning pain
b. dribbling of urine or feces from vagina
c. incontinence
d. mucopurulent cervical discharge

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_____ 13. Health care management for patients with vaginitis includes

a. insertion of a plastic pessary
b. cauterization
c. use pads or protective pants for dribbling of urine or fecal material
d. teach proper hygiene techniques

_____ 14. A patient with a vaginal fistula may show symptoms such as

a. constipation
b. escape of flatus from vagina
c. bleeding between menses
d. pain in back of pelvis

_____ 15. The teaching plan for patients with cystocele or rectocele includes

a. discuss family planning
b. help patient contact support groups
c. instruct patient to use protective pads or plastic garments for incontinence
d. patients should avoid intercourse or douching until approved by physician

OBJECTIVE 5 **Choose the correct word or phrase to complete statements about diseases and disorders of the cervix and uterus.** Write the correct letter in the blank.

_____ 1. Signs and symptoms of cervicitis include

a. lower back pain
b. fever and chills
c. painful intercourse
d. bleeding between menses or after intercourse

_____ 2. The teaching plan for patients with cervicitis should include

a. discuss family planning
b. patients should avoid using tampons
c. patients should avoid intercourse or douching until approved by physician
d. stress the importance of follow-up care

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_____ 3. Risk factors for cervical cancer include

a. late menarche
b. multiple sex partners
c. obesity
d. use of estrogen without progestin

_____ 4. Signs and symptoms of cervical cancer include

a. bleeding between menses or after intercourse
b. dysmenorrhea
c. irregular menstrual cycles
d. sensation of bearing down

_____ 5. Signs and symptoms of a prolapsed uterus include

a. amenorrhea or dysmenorrhea
b. back pain and sensation of bearing down
c. profuse vaginal bleeding
d. pain in back, upper thighs, and legs

_____ 6. Risk factors for uterine cancer include

a. amenorrhea
b. endocrine disorders
c. diabetes mellitus
d. hypotension

_____ 7. Health care management for patients with uterine cancer includes

a. colporrhaphy
b. hysterectomy
c. stool softeners
d. use of a pessary

_____ 8. When planning for the discharge of a patient with uterine cancer, you should include ________________ in your teaching plan.

a. emphasizing the need for follow-up care
b. discussing family planning
c. teaching the patient how and when to use medication
d. stressing the need to treat sexual partners

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_____ 9. In patients with endometriosis, endometrial cells grow outside the uterus and

a. cause emboli and thrombi
b. bleed from hormone stimulation, causing inflammation
c. become necrotic, causing inflammation
d. may become malignant

_____ 10. Health care management for patients with endometriosis includes

a. incision and drainage
b. genetic counseling
c. radiation therapy
d. oral contraceptives

_____ 11. Signs and symptoms of endometriosis include severe pain that begins

a. after the onset of menses and increases during period
b. in midcycle and ends before the onset of menses
c. on the first day of menses and gradually tapers off over several days
d. two to three days before the onset of menses

_____ 12. Part of the teaching plan for patients with endometriosis should include

a. emphasizing the need for follow-up care
b. discussing family planning
c. teaching the patient how and when to use medication
d. stressing the need to treat sexual partners

_____ 13. Fibroid tumors usually ___________ after menopause

a. appear
b. become malignant
c. disappear
d. exacerbate

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_____ 14. Radiation therapy may be used on women with fibroid tumors

a. if metastasis is suspected
b. to shrink tumors before surgery
c. who do not respond to chemotherapy
d. who are nearing menopause

_____ 15. Part of the teaching plan for patients with fibroid tumors should include stressing follow-up care, especially for patients

a. who have not reached menopause
b. who did not have a hysterectomy
c. who received radiation therapy
d. who received chemotherapy

_____ 16. Signs and symptoms of fibroid tumors include

a. amenorrhea
b. nausea and vomiting
c. vaginal bleeding
d. purulent discharge

OBJECTIVE 6

Choose the correct word or phrase to complete statements about diseases and disorders affecting the ovaries and fallopian tubes. Write the correct letter in the blank.

_____ 1. Dermoid cysts are

a. always benign
b. always malignant
c. benign tumors that can become malignant tumors
d. usually malignant

_____ 2. Signs and symptoms of dermoid cysts include

a. cystitis
b. fever and chills
c. swollen abdomen
d. vaginal bleeding

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_____ 3. A bartholin cyst is caused by _______ involving the bartholin gland

a. endometriosis
b. infection
c. hyperplasia
d. necrosis

_____ 4. Signs and symptoms of a bartholin cyst include

a. abdominal pain
b. menstrual irregularities
c. palpable, mobile cyst
d. vaginal bleeding

_____ 5. The teaching plan for a patient with a dermoid cyst or bartholin cyst should include

a. emphasize the need for follow-up care, especially with patients who did not have a hysterectomy
b. discuss family planning
c. discuss symptoms that should be reported to physician
d. teach patient how and when to use medications

_____ 6. Risk factors for ovarian cancer include

a. history of breast cancer
b. infertility
c. multiparity
d. history of gonorrhea

_____ 7. Signs and symptoms of ovarian cancer include

a. abnormal vaginal bleeding
b. enlargement of abdomen
c. purulent discharge
d. severe abdominal pain

_____ 8. When planning for the discharge of a patient with ovarian cancer, your teaching plan should include

a. discussing the need for meticulous personal hygiene
b. discussing family planning
c. helping the patient contact support groups
d. teaching the patient how and when to use topical medications

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_____ 9. Pelvic inflammatory disease begins as

a. endometriosis or mastitis
b. mastitis or vulvitis
c. oophoritis or salpingitis
d. vaginitis or oophoritis

_____ 10. Health care management for patients with pelvic inflammatory disease includes

a. chemotherapy or radiation therapy
b. control infection and apply heat to abdomen
c. prevent ovulation
d. use of a plastic pessary

_____ 11. Signs and symptoms of pelvic inflammatory disease include

a. amenorrhea
b. enlarged uterus
c. foul, purulent vaginal exudate
d. sore throat

_____ 12. The teaching plan for a patient with pelvic inflammatory disease should include

a. emphasize the need to follow special diet
b. discuss family planning
c. instruct patient to change tampons every hour
d. patient should avoid using tampons

_____ 13. Toxic shock syndrome is often seen in women who

a. are menstruating and use tampons
b. have multiple sex partners
c. use IUDs
d. use oral contraceptives

_____ 14. Health care management for the patient with toxic shock syndrome includes

a. incision and drainage of infected areas
b. chemotherapy or radiation therapy
c. relieve pain
d. maintain fluid balance

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_____ 15. Signs and symptoms of toxic shock syndrome include

a. constipation and flatulence
b. erythematous rash, especially on palms and soles
c. foul, greenish or yellowish vaginal discharge
d. pain or dragging feeling in abdomen

_____ 16. Promoting healing for a patient with toxic shock syndrome includes

a. check for tampon use, remove tampon
b. apply heat to abdomen to relieve pain
c. provide care for patient receiving chemotherapy
d. provide pre- and postoperative care

OBJECTIVE 7

Choose the correct word or phrase to complete statements about diseases and disorders of the breast. Write the correct letter in the blank.

_____ 1. Acute mastitis usually occurs in women who are

a. obese
b. lactating
c. pregnant
d. menopausal

_____ 2. Acute mastitis may be caused by

a. abnormal estrogen levels
b. high-fat diet
c. nipple fissures
d. systemic infection

_____ 3. Health care management for the patient with acute mastitis includes encouraging

a. applying medicated lotion to nipples daily
b. extra breastfeeding to empty breasts
c. applying ice packs to breasts
d. use of a supportive, properly fitting brassiere

_____ 4. Signs and symptoms of acute mastitis include

a. blood-tinged nipple discharge
b. nausea and vomiting
c. tender, engorged breasts
d. orange-peel skin

May be photocopied for student use.

_____ 5. Fibrocystic breast disease is defined as

a. multiple, malignant nodes
b. cyclic hyperplasia that causes benign tumors
c. pre-cancerous cysts
d. unilateral cysts caused by infected mammary glands

_____ 6. Some patients with fibrocystic breast disease are helped by

a. avoiding coffee, tea, chocolate, and cola
b. lumpectomy
c. oral contraceptives
d. radiation therapy

_____ 7. Signs and symptoms of fibrocystic breast disease include

a. palpable masses that are usually fixed
b. palpable masses that are usually bilateral, moveable, and tender
c. pink or bloody nipple discharge
d. inverted nipples and orange-peel skin

_____ 8. The teaching plan for patients with fibrocystic breast disease includes

a. emphasize the importance of yearly mammograms
b. encourage patient to experiment with vegetarian diet
c. instruct patient to wear medical alert bracelet
d. teach post-mastectomy exercises

_____ 9. Patients with acute mastitis should stop nursing if they have

a. edema
b. abscesses
c. pain
d. fissures

May be photocopied for student use

_____ 10. Risk factors for breast cancer include

a. early menopause
b. late menarche
c. infertility
d. history of fibrocystic breast disease

_____ 11. Signs and symptoms of breast cancer include

a. palpable mass that is usually fixed, irregular, and firm
b. palpable mass that is usually moveable and tender
c. greenish or yellowish nipple discharge
d. tender, engorged breasts

_____ 12. The teaching plan for patients with breast cancer should include

a. encourage patient to wear supportive, properly fitting brassiere
b. emphasize the need to avoid injury to the arm on the affected side
c. discuss prophylactic removal of unaffected breast
d. discuss hormone replacement therapy

OBJECTIVE 8

Choose the correct word or phrase to complete statements about surgical interventions affecting the female reproductive system. Write the correct letter in the blank.

_____ 1. Delila wants to know how you will monitor her condition. The BEST procedure *at this time* is to ___.

a. obtain a completed informed consent prior to surgery
b. take her vital signs as ordered
c. provide emotional support for her and her family throughout her illness
d. administer medications as ordered

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_____ 2. Ted tells you his wife is depressed and worried about her surgery. The BEST procedure *at this time* is to ___.

- a. provide pre- and postoperative care for her
- b. assist her in turning, coughing, and deep breathing
- c. obtain a completed informed consent prior to surgery
- d. provide emotional support for her and her family throughout her illness

_____ 3. Connie wants to know if she will have bleeding or drainage tubes after surgery, and what to expect. The BEST procedure *at this time* is to ___.

- a. check surgical dressings and gravity-flow drainage container to assess bleeding and drainage
- b. take her vital signs as ordered
- c. encourage a healthy regimen, including good diet, adequate rest, and exercise as allowed
- d. evaluate her knowledge of the surgical procedure, and answer questions

_____ 4. Melissa wants to know how to avoid complications of pneumonia. The BEST procedure *at this time* is to ___.

- a. give emotional support as needed to her to cope with changes in body image
- b. provide pre- and postoperative care for her
- c. administer medications as ordered
- d. assist her in turning, coughing, and deep breathing

OBJECTIVE 9 **Choose the correct word or phrase to complete statements about common diseases and disorders of the male reproductive system.** Write the correct letter in the blank.

_____ 1. Phimosis is defined as

- a. malignancy of the foreskin
- b. congenital stenosis or constriction of the foreskin
- c. congenital lack of opening in foreskin
- d. inflammation of the foreskin

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_____ 2. Surgeries for phimosis include

a. circumcision
b. orchiopexy
c. penectomy
d. plastic surgery

_____ 3. Hydrocele is defined as

a. abnormal dilation of veins in the scrotum
b. edema of the testicle
c. collection of fluid in the tissues enclosing the testicle
d. inflammation of the spermatic vein

_____ 4. Hydrocele may be caused by

a. abnormally long spermatic vein
b. malignancy
c. sexually transmitted disease
d. trauma

_____ 5. Health care management for the patient with hydrocele includes

a. chemotherapy or radiation therapy
b. cold packs and scrotal support
c. ligation of the spermatic vein
d. orchiopexy or orchiectomy

_____ 6. Signs and symptoms of hydrocele include

a. dragging sensation in scrotum
b. palpable mass in scrotum
c. swelling of scrotum
d. tenderness in scrotum and upper thighs

_____ 7. Varicocele is defined as

a. abnormal dilation of veins in the scrotum
b. edema of the testicle
c. collection of fluid in the tissues enclosing the testicle
d. inflammation of the spermatic vein

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_____ 8. Health care management for the patient with varicocele includes

a. antibiotics
b. apply heat to affected area
c. ligation of the spermatic vein
d. orchiopexy or orchiectomy

_____ 9. Signs and symptoms of varicocele include

a. dragging or pulling sensation
b. palpable lump in testis
c. purulent discharge from penis
d. sharp, stabbing pain

_____ 10. Testicular cancer usually occurs in males of what age group?

a. 1 year to puberty
b. 20 to 50
c. 25 to 35
d. 50 and over

_____ 11. Risk factors for testicular cancer include

a. cryptorchidism
b. hydrocele
c. phimosis
d. varicocele

_____ 12. Health care management for the patient with testicular cancer includes

a. aspiration of fluid
b. ligation of spermatic vein
c. orchiectomy
d. orchiopexy

_____ 13. Signs and symptoms of testicular cancer include

a. bloody or pink discharge from penis
b. palpable lump in testis
c. sharp pain in lower back
d. warm, inflamed testes

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_____ 14. The teaching plan for a patient with testicular cancer should include

a. assure the patient that removal of one testis will not make him sterile or impotent
b. caution patient not to palpate testicle
c. discuss family planning
d. teach patient to care for catheter

_____ 15. Orchitis is defined as

a. abnormal dilation of veins in the scrotum
b. congenital stenosis or constriction of the foreskin
c. inflammation of the testes
d. malignant growth in the testes

_____ 16. Orchitis may be caused by

a. circumcision
b. infection
c. developmental defect
d. cryptorchidism

_____ 17. Health care management for patients with orchitis includes

a. diuretics
b. aspiration of fluid
c. ice compresses
d. ligation of spermatic vein

_____ 18. Signs and symptoms of orchitis include

a. narrow, retracted foreskin
b. dragging or pulling sensation
c. pus in urine
d. palpable lump in testis

_____ 19. The teaching plan for patients with orchitis should include

a. emphasize adequate fluid intake and good perineal hygiene
b. avoid strenuous exercise or exertion until approved by physician
c. patients should continue to wear scrotal support until otherwise directed
d. teach the patient to perform TSE

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OBJECTIVE 10

Choose the correct word or phrase to complete statements about sexually transmitted diseases. Write the correct letter in the blank.

_____ 1. Gonorrhea is defined as a(n)

a. acute viral infection
b. bacterial infection of the mucous membranes
c. four-stage contagious infection
d. nongonococcal genital infection

_____ 2. Health care management for patients with gonorrhea includes

a. apply cold packs for discomfort
b. encourage patient to notify sexual contacts
c. discuss alternate methods of birth control
d. warn patient against donating blood or organs

_____ 3. Signs and symptoms of gonorrhea include

a. burning pain and itching
b. malaise
c. painless chancre
d. purulent discharge

_____ 4. The secondary stage of syphilis is characterized by

a. chancre
b. dormancy
c. exacerbation
d. skin rash

_____ 5. Complications of untreated syphilis include

a. ectopic pregnancy
b. epididymitis and prostatitis
c. meningitis and dementia
d. pelvic inflammatory disease

_____ 6. Signs and symptoms of the first stage of syphilis include

a. anorexia and low-grade fever
b. confusion and lack of coordination
c. hard, painless, ulcerating sore
d. maculopapular rash

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_____ 7. Chlamydia is defined as a(n)

a. acute viral infection
b. bacterial infection of the mucous membranes
c. four-stage contagious infection
d. nongonococcal genital infection

_____ 8. Medications for chlamydia include
a. analgesics
b. antibiotics
c. antifungal agents
d. antineoplastic agents

_____ 9. Signs and symptoms of chlamydia include

a. dysuria
b. headache and body aches
c. painless, ulcerating chancre
d. tumorlike lesions

_____ 10. The teaching plan for patients with gonorrhea, syphilis, or chlamydia should include

a. advise female patients to douche daily
b. discuss alternate methods of birth control
c. stress that the patient must take all medication, even if symptoms disappear
d. warn patient against donating blood or organs

_____ 11. Herpes genitalis is defined as a(n)

a. bacterial infection of the mucous membranes
b. fungal infection spread by sexual contact
c. incurable viral infection
d. viral infection that occurs in two stages

_____ 12. Signs and symptoms of herpes genitalis include

a. "cold sore" or "fever blister" on lips
b. fever, chills, and anorexia
c. night sweats
d. vesicles, burning pain, and itching in genital area

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_____ 13. The teaching plan for patients with herpes genitalis should include

a. advise female patients to avoid douching
b. emphasize the need for adequate nutrition
c. discuss possible need for cesarean delivery for pregnant patients
d. stress the fact that the patient is contagious even when asymptomatic

OBJECTIVE 11 **Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the reproductive system.** Write the correct letter in the blank.

_____ 1. Cryptorchidism is defined as

a. congenital absence of one testicle
b. failure of one or both testes to descend into the scrotum
c. inflammation of the testes
d. hyperplasia of one or both testes

_____ 2. Cryptorchidism may be caused by

a. lesions
b. malignancy
c. sexually-transmitted disease
d. trauma

_____ 3. Health care management for patients with cryptorchidism includes

a. administration of chorionic gonadotropin
b. palpating abdomen to stimulate normal growth
c. scrotal support and cold packs for pain
d. surgery after patient has reached puberty

_____ 4. Signs and symptoms of cryptorchidism include

a. fever and chills
b. edema and swelling of scrotal area
c. absence of one or both testes in scrotum
d. dull pain or dragging sensation in scrotum

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_____ 5. The teaching plan for patients with cryptorchidism should include

a. caution patient against touching testicles
b. help patient and family deal with probable infertility and impotency
c. stress the need to continue taking medications after symptoms subside
d. teach patient to perform regular testicular self-examination

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NOTICE: Objective 12 is evaluated on the Assignment Sheet in this unit. If you have not completed this activity, check with your instructor.

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WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE REPRODUCTIVE SYSTEM

XII

OBJECTIVE 1

1. c
2. b
3. a
4. e
5. g
6. d
7. j
8. h
9. l

OBJECTIVE 2

1. c
2. a
3. d
4. a
5. b
6. d
7. d
8. c
9. c
10. d
11. d
12. b

OBJECTIVE 3

1. c
2. b
3. a
4. c

OBJECTIVE 4

1. b
2. c
3. b
4. d
5. a
6. a
7. d
8. b
9. c
10. a
11. b
12. a
13. d
14. b
15. c

OBJECTIVE 5

1. d
2. c
3. b
4. a
5. b
6. c
7. b
8. a
9. b
10. d
11. a
12. b
13. c
14. d
15. b
16. c

OBJECTIVE 6

1. c
2. d
3. b
4. c
5. c
6. b
7. b
8. c
9. c
10. b
11. c
12. d
13. a
14. d
15. b
16. a

OBJECTIVE 7	1.	b	6.	a	11.	a		
	2.	c	7.	b	12.	b		
	3.	d	8.	a				
	4.	c	9.	b				
	5.	b	10.	d				
OBJECTIVE 8	1.	b						
	2.	d						
	3.	d						
	4.	d						
OBJECTIVE 9	1.	b	6.	c	11.	a	16.	b
	2.	a	7.	a	12.	c	17.	c
	3.	c	8.	c	13.	b	18.	c
	4.	d	9.	a	14.	a	19.	a
	5.	b	10.	c	15.	c		
OBJECTIVE 10	1.	b	6.	c	11.	c		
	2.	b	7.	d	12.	d		
	3.	d	8.	b	13.	c		
	4.	d	9.	a				
	5.	c	10.	c				
OBJECTIVE 11	1.	b						
	2.	a						
	3.	a						
	4.	c						
	5.	d						

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH VISION DISORDERS

XIII

INTRODUCTION

About one million persons in the United States are legally blind, and about 1.5 million are visually handicapped. Visual impairment ranges from refractive errors that can be corrected with glasses to total blindness. A person is considered blind when the visual distance is no better than 20/200 with correction (glasses or contact lenses). This means that the impaired person can see at 20 feet what the normal person can see at 200 feet.

Loss of vision affects self-confidence and the ability to interact with others and with the environment. Adjusting to this handicap is difficult. A feeling of being socially isolated can develop because communication with others is restricted. The activities of daily living are more complex. Job opportunities, hobbies, and the ability to remain independent also change.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the eye and associated nursing processes. In addition, you will demonstrate these competencies by completing Assignment Sheets, Job Sheets, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the eye to their correct definitions.
2. Choose the correct word or phrase to complete statements about common diseases and disorders of the eye.
3. Choose the correct word or phrase to complete statements about infectious diseases and disorders of the eye.
4. Choose the correct word or phrase to complete statements about traumatic injuries to the eye.
5. Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the eye.

6. Choose the correct word or,phrase to complete statements about pediatric diseases and disorders of the eye.

7. Plan care for a patient with a vision impairment. (Assignment Sheet 1)

8. Prepare a teaching plan for a patient who is to undergo a surgical intervention for a vision disorder. (Assignment Sheet 2)

9. Apply a sterile dressing to the eye. (Job Sheet 1)

10. Perform an eye irrigation. (Job Sheet 2)

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH VISION DISORDERS

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objective 1, basic information that supports the rest of the unit;

  Part 2 — Objectives 2 and 3, the first two groupings, including common and infectious diseases and disorders of the eye; and

  Part 3 — Objectives 4-6, the next three groupings, including traumatic injuries, pre- and postoperative teaching instructions, and pediatric diseases and disorders of the eye.
- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a guest speaker to discuss diseases and disorders of the eye.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.
- Obtain models and large pictures of the eye.
- Make a poster of the eye.
- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration
  - Assist students to conduct a chapter service project on the eye.
  - Develop objectives for service project and identify a theme.
  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.
  - Plan community or school health project that involves disseminating pamphlets about diseases and disorders of the eye.
- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.
- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the eye to their correct definitions.

- Discuss terms associated with the eye.
- Have students play reinforcement games and work crossword puzzles using terms.
- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about common diseases and disorders of the eye.

- Have students share relevant incidents about friends or family members who have problems related to common diseases and disorders of the eye.
- Have students share ideas that might be helpful in evaluating common diseases and disorders of the eye.
- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the eye.
- Discuss other common diseases and disorders of the eye not mentioned in this unit.
- Use the information in this section to complete Assignment Sheet 1.

- Caution students that ear drops may be mistaken for eye drops; remind students to check labels carefully before administering any medication

- Have students perform an assessment of the eye.

- Review the structure and function of the eye.

Objective 3: Choose the correct word or phrase to complete statements about infectious diseases and disorders of the eye.

- Have students share relevant incidents about friends or family members who have problems related to infectious diseases and disorders of the eye.

- Have students share ideas that might be helpful in evaluating infectious diseases and disorders of the eye.

- Discuss ways in which nurses can improve the care of patients with infectious diseases and disorders of the eye.

- Discuss other infectious diseases and disorders of the eye not mentioned in this unit.

- Stress that students can use the information in this unit to complete Job Sheet 1.

Objective 4: Choose the correct word or phrase to complete statements about traumatic injuries to the eye.

- Have students share relevant incidents about friends or family members who have problems related to traumatic injuries to the eye.

- Have students share ideas that might be helpful in evaluating traumatic injuries to the eye.

- Discuss ways in which nurses can improve the care of patients with traumatic injuries to the eye.

Objective 5: Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the eye.

- Have students share relevant incidents about friends or family members who have problems related to surgical procedures for diseases and disorders of the eye.

- Have students share ideas that might be helpful in evaluating patients preparing to undergo surgery to the eye.

- Discuss ways in which nurses can improve the care of patients preparing to undergo surgery to the eye.
- Use the information in this section to complete Assignment Sheet 2.
- Review standard pre- and post operative care.

Objective 6: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the eye.

- Have students share relevant incidents about friends or family members who have problems related to pediatric diseases and disorders of the eye.
- Have students share ideas that might be helpful in evaluating pediatric diseases and disorders of the eye.
- Discuss ways in which nurses can improve the care of patients with pediatric diseases and disorders of the eye.

APPLICATION

Objective 7: Plan care for a patient with a vision impairment. (Assignment Sheet 1)

- Use Assignment Sheet 1 to give students an opportunity to practice ideas that help when they plan care for a patient with a vision impairment.
- Provide a care plan form for students' use.

Objective 8: Prepare a teaching plan for a patient who is to undergo a surgical intervention for a vision disorder. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give students an opportunity to practice ideas that help when they teach patients who undergo a surgical intervention for a vision disorder.

Objective 9: Apply a sterile dressing to the eye. (Job Sheet 1)

- Use Job Sheet 1 to give students hands-on experience in applying a sterile dressing to the eye.
- Use a mannequin to practice and demonstrate procedures in the classroom.

Objective 10: Perform an eye irrigation. (Job Sheet 2)

- Use Job Sheet 2 to give students hands-on experience in performing eye irrigation.

- Use a mannequin to practice and demonstrate procedures in the classroom.

EVALUATION

Pretest

- Give Written Test as pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.
- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.
- Complete appropriate sections of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.
- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *University of California Berkeley Wellness Letter*, 48 Shattuck Square, Suite 43, Berkeley, CA 94704-1140.

UNIT REFERENCES

- Betz, Cecily Lynn and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St. Louis: Mosby-Year Book, Inc., 1991.
- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.
- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.
- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.
- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.
- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St Louis: The C.V. Mosby Company, 1990.

INFORMATION SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH VISION DISORDERS

XIII

OBJECTIVE 1

Match terms associated with diseases and disorders of the eye to their correct definitions.

- **aphakia** — Absence of the lens of an eye
- **blepharospasm** — Eyelid spasm
- **blindness**— Visual acuity of no better than 20/200 with corrective lenses, or a visual field of less than 20°
- **choroid** — A vascular layer of the eye between the sclera and retina
- **ciliary body** — A vascular layer between the iris and anterior choroid
- **hyphema** — The presence of blood in the anterior chamber of the eye
- **intraocular** — Within the eyeball
- **iris** — The colored membrane between the lens and cornea
- **opaque** — Not transparent
- **O.D.** — Abbreviation for *oculus dexter*, used to indicate medication to be used in the right eye
- **O.S.** — Abbreviation for *oculus sinister*, used to indicate medication to be used in the left eye
- **O.U.** — Abbreviation for *oculus uterque*, used to indicate medication to be used in both eyes
- **photophobia** — Sensitivity to bright light
- **sclera** — A tough membrane that covers the white of the eye

OBJECTIVE 2

Choose the correct word or phrase to complete statements about common diseases and disorders of the eye.

Description and etiology

Glaucoma — A disease characterized by increased intraocular pressure. The normal balance between production and drainage of aqueous humor is disturbed. The intraocular pressure increases, producing damage to the eye and complete loss of vision if left untreated. Glaucoma may be chronic (the most common type, known as *simple chronic glaucoma* or *open-angle glaucoma*) or acute (known as *closed-angle glaucoma*). Most glaucoma is primary, but secondary glaucoma can also occur.

Causes

- Primary
  - Clogged drainage meshwork (open-angle)
  - Closed or narrowed angle between cornea and iris (closed-angle)
- Secondary
  - Trauma or surgery
  - Long-term steroid use
  - Neoplasm
  - Disease

Health care management

- Secondary glaucoma: treat underlying condition
- Lifelong use of medications
- Regular follow-up visits
- Patient should wear medical alert bracelet and carry eye drops at all times
- Medications: miotics, beta blockers, carbonic anhydrase inhibitors, osmotic diuretics
- Surgeries: trabeculectomy, trabeculoplasty, peripheral iridectomy, iridotomy, goniotomy
- Complications: blindness

ASSESSMENT

Signs and symptoms

Glaucoma

- Open angle (chronic)
  - Slow, progressive vision loss, beginning with peripheral vision
  - Discomfort or pain in eye
  - Difficulty adjusting to darkness
  - Loss of color vision
  - Appearance of halos around lights

- Closed angle (acute)
  - — Severe pain
  - — Nausea and vomiting
  - — Appearance of rainbow-colored halos around lights
  - — Dilated pupil
  - — Loss of vision
  - — Reddened sclera

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

GLAUCOMA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Provide emotional support • Use aseptic technique when changing dressings
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Observe for exacerbation of symptoms
• Plan for patient's discharge	• Prepare teaching plan — Patient should understand that lost vision cannot be restored, but further loss can be prevented — Teach patient how and when to use medications — Emphasize the need to continue taking medication, even if symptoms subside — Stress that patients with glaucoma should carry a supply of their medication at all times — Teach patient to avoid factors that cause increased intraocular pressure (constricting garments, straining, strenuous exercise) — Patients should wear medical alert bracelets and tell other health care professionals that they have glaucoma before taking any medication or undergoing any procedure — Help patient contact support groups

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Cataract — The lens becomes clouded and opaque, leading to blurring and loss of vision.

Causes

- Aging (most common cause)
- Trauma
- Eye disease
- Systemic disease
- Congenital

Health care management

- Surgical removal of the lens is the only possible treatment
- Post-surgery vision is improved by lens implantation, contact lenses, or cataract glasses
- Surgeries: intracapsular extraction, extracapsular extraction

ASSESSMENT

Cataract

Signs and symptoms

- Blurry or hazy vision
- Photosensitivity
- Gray or white pupil
- Gradual vision loss

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

CATARACTS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide supportive care • Use aseptic technique when changing dressings
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Teach use and care of cataract glasses or contact lenses — Caution patient to avoid rubbing eye, bending at waist, or shampooing hair for period specified by physician — Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Retinal detachment — Separation of the two layers of the retina. Holes or tears in the inner layer allow fluid to come between the two layers, causing progressive detachment. Detachment may occur suddenly or slowly.

Causes

- Trauma
- Degeneration
- Aphakia
- Idiopathic

Health care management

- Immediate care includes bed rest, resting and patching the affected eye
- Surgery should be performed as soon as possible to prevent further damage and loss of sight
- Prevent jerking head movements, vomiting, and coughing
- Medications: antibiotics, steroids, mydriatics, cycloplegics, antiemetics
- Surgeries: cryosurgery, diathermy, photocoagulation, scleral buckling
- Complications: glaucoma

ASSESSMENT

Signs and symptoms

Retinal detachment

- Flashes of light
- Blurred vision
- "Floaters" in field of vision
- Sudden pain
- Sensation of curtain or veil being pulled over eye
- Loss of vision

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

RETINAL DETACHMENT

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions
Check medication record	
Collect equipment	
Promote healing	Administer medications Provide pre- and postoperative care Provide emotional support Position patient as ordered by physician Provide calm, quiet environment; keep patient as calm as possible

• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Instruct patient to avoid strenuous activity, reading, handwork, and shampooing for period determined by physician — Teach how and when to use medications — Detachment may recur; discuss symptoms that should immediately be reported to physician — Discuss injury prevention

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NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 3 — **Choose the correct word or phrase to complete statements about infectious diseases and disorders of the eye.**

Description and etiology

Hordeolum (sty) — A contagious infection of the eyelash follicle or sebaceous gland of the eyelid.

Causes

- Staphylococcus infection

Health care management

- Warm, moist compresses
- Use aseptic technique
- Medications: topical antibiotics

ASSESSMENT — **Signs and symptoms**

Hordeolum

- Small, localized abscess near eyelashes
- Pain
- Edema of eyelid

Description and etiology	**Blepharitis** — Inflammation of the eyelids.
Causes	• Staphylococcus infection (most common cause)
	• Psoriasis
	• Seborrhea
Health care management	• Warm, moist compresses
	• Use aseptic technique
	• Medications: topical antibiotics, steroids
ASSESSMENT	**Signs and symptoms**
Blepharitis	• Pruritus
	• Redness and pain
	• Photophobia
	• Lacrimation and crusting; lids become crusted together overnight
	• Complications: keratitis

Description and etiology	**Conjunctivitis (pinkeye)** — An inflammation of the conjunctiva.
Causes	• Viral infection (may be transmitted from mother to infant during delivery)
	• Bacterial infection
	• Allergic reaction
	• External irritants
	• Trauma
Health care management	• Warm compresses
	• Keep eye area clean
	• Use aseptic technique
	• Medications: topical antibiotics, steroids

ASSESSMENT	**Signs and symptoms**
Conjunctivitis	• Reddened conjunctiva • Crusting discharge • Pruritus • Pain
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

HORDEOLUM, BLEPHARITIS, and CONJUNCTIVITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Apply warm, moist compresses • Administer medications • Use aseptic technique
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Stress the importance of handwashing to prevent reinfection; teach the patient to wash hands before and after touching eyes — Teach patient when and how to use medications — Teach special care needed for eye medications — Warn patient against touching or rubbing eyes — Instruct patient to wear sunglasses to reduce irritation from light

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes.

- Contribute to plan of care update.

Description and etiology

Uveitis — An inflammation of the uveal tract (iris, ciliary body, and choroid).

Causes

- Autoimmune disorder
- Infection
- Surgery or trauma to uveal tract of other eye (sympathetic ophthalmia)
- Idiopathic

Health care management

- Moist compresses
- Medications: antibiotics, anti-inflammatory agents, mydriatics, cycloplegics
- Surgeries: enucleation (to prevent sympathetic ophthalmia)

ASSESSMENT

Signs and symptoms

Uveitis

- Eye pain or discomfort
- Photophobia
- Blurred vision
- Lacrimation
- Loss of vision

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

UVEITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Provide supportive care
• Continually monitor patient's condition	• Monitor vital signs • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Teach patient how and when to use medications — Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Keratitis** — An inflammation of the cornea. Keratitis may be acute or chronic; the inflammation may be superficial or deep.
Causes	• Herpes simplex • Bacterial infection • Syphilis • Tuberculosis • Allergic reaction
Health care management	• Treat underlying condition • Warm compresses

	• Use aseptic technique • Eye patch and rest for affected eye • Medications: antibiotics, cycloplegics, idoxuridine • Surgeries: keratoplasty • Complications: blindness
ASSESSMENT	**Signs and symptoms**
Keratitis	• Pain • Photophobia • Blepharospasm • Tearing
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

KERATITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Encourage bed rest • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Patients needing keratoplasty will be placed on a waiting list — Emphasize the need to rest the eyes — Discuss side effects of medications (blurry vision) — Teach patient how and when to use medications — Discuss symptoms that should be reported to physician

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 4

Choose the correct word or phrase to complete statements about traumatic injuries to the eye.

NOTE: Hyphema, which may be present in traumatic injuries to the eye, is a medical emergency.

Description and etiology

Penetrating injury — A direct blow to the eye with a sharp object that penetrates the surface.

Causes

- Trauma

Health care management

- Do not apply pressure to the injured eye
- Emergency treatment: cover affected eye with protective eye cup (plastic drinking cup can be used)
- Cover uninjured eye to prevent movement of injured eye
- Prevent patient from bending over at the waist, which can increase intraocular pressure
- Stabilize the penetrating object to prevent movement and further damage — **do not attempt to remove the object**; it will be removed by the physician
- Medications: sedatives, analgesics, tetanus prophylaxis, antimicrobials

ASSESSMENT

Signs and symptoms

Penetrating injury

- Foreign object visible in eye
- Pain may be present, but nerve damage may result in lack of pain
- Tearing
- Redness

Description and etiology

Chemical injury — Damage caused by contact with a chemical solution.

Causes	• Acid or alkali solution
Health care management	• Emergency treatment: irrigate the affected eye with large amounts of clear water for at least 30 minutes for alkaline chemicals; 15 minutes for acids • Use litmus paper to determine the pH of tears; continue irrigating until pH is neutral • Medications: topical anesthetics, analgesics, antibiotics, cycloplegics, collagenase inhibitors
ASSESSMENT	**Signs and symptoms**
Chemical injury	• Severe pain
Description and etiology	**Actinic injury** — Damage to the cornea from ultraviolet rays.
Causes	• Excessive exposure to direct sunlight • Exposure to sun reflecting off of snow or water • Use of sun lamps
Health care management	• Pain relief • Cold compresses • Medications: analgesics, topical anesthetics, antibiotics
ASSESSMENT	**Signs and symptoms**
Actinic injury	• Pain that develops several hours after exposure to ultraviolet light
Description and etiology	**Abrasion** — A scrape that removes part of the cornea and affects the superficial layers of the eye.
Causes	• Accidental contact (with fingernails, clothes, etc.) • Improper use of contact lenses
Health care management	• Clean eye with saline solution • Cold compresses

- Use fluorescein stain to detect injured areas
- Use pressure bandage to prevent movement of eyelid
- Eye rest
- Medications: antibiotics, analgesics

ASSESSMENT

Abrasion

Signs and symptoms

- Pain
- Photophobia
- Tearing

Description and etiology

Laceration — A tear that removes tissue from the eye or surrounding skin. If the eyelid is injured, scarring can result, preventing the patient from closing the eyelid completely. If the eye is damaged, serious visual defects can result.

Causes

- Varies

Health care management

- Do not use pressure to stop bleeding — this can cause further eye damage
- Clean eye with saline solution
- Cover eye with protective cup
- Eye rest
- Medications: antibiotics, analgesics

ASSESSMENT

Laceration

Signs and symptoms

- Pain
- Photophobia
- Tearing

Description and etiology	**Contusion** — A bruise that can cause bleeding and a hematoma. This condition is referred to as a "black eye". Blood enters the tissues and discolors the lid, eye, or surrounding skin and causes swelling.
Causes	• Trauma
Health care management	• Emergency treatment: use cold compress to help stop bleeding • Check for presence of fractures • Use warm compresses 48 hours after injury • Medications: analgesics
ASSESSMENT	**Signs and symptoms**
Contusion	• Dark discoloration around eye • Swelling
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

TRAUMATIC INJURIES

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Use cool or warm compresses as needed • Apply protective eye cup • Cover unaffected eye, if necessary • Use aseptic technique • Prevent further damage
• Continually monitor patient's condition	• Monitor vital signs • Observe for complications

• Plan for patient's discharge	• Prepare teaching plan — Discuss preventive measures — Teach patient how and when to use medications — Discuss symptoms that should be reported to physician

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NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the eye.

Teaching interventions and instructions for surgical procedures:

- Reinforce the physician's explanation of the procedure with an explanation or drawing.
- Encourage the patient to express feelings of fear and anxiety.
- Explain and obtain a completed informed consent prior to the procedure.
- Orient the patient to the surroundings with a tour of the unit.
- Explain all the equipment in the room and environment, if the patient has difficulty seeing.
- Teach the patient to maintain the correct position as indicated for the surgery and patient's condition.
- Encourage the patient to ask for help when getting in and out of bed.
- Emphasize the need to wash hands before and after the treatment of each eye to prevent contamination and infection.

- Explain all treatments and care to patients before performing them.
- Reassure the patient that medications are labeled "ophthalmic" and will be administered as prescribed.
- Reassure the patient that analgesics, sedatives, and oral medications will be administered as ordered.
- Instruct the patient to avoid touching the face or eyes.
- Teach communication techniques to use while eyes are covered.
- Reassure the patient that you will speak before touching them.
- Tell the patient that caution will be used to prevent pressure on the eyes when patient is moved.
- Reinforce that vital signs will be taken often before and after surgery, and complications will be noted and reported.
- Instruct the patient to observe for unusual pain, drainage, or symptoms of intraocular pressure, and notify the physician immediately.
- Increase the patient's understanding about not using any bright lights.
- Explain that you will assist at mealtimes, as needed.
- Teach and assist with ambulation techniques, as needed.
- Instruct patient and family on home care. The patient should avoid sudden movements, rubbing the eyes, coughing, sneezing, blowing nose, bending, stooping, washing the face, and pulling the skin while shaving. These activities can cause increase intraocular pressure, resulting in serious complications.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the eye.

Description and etiology

Retinoblastoma — A malignant tumor of the retina. Retinoblastoma is usually diagnosed before the child is 4 years old and may be bilateral or unilateral.

Causes

- Genetic factors

Health care management

- If both eyes are affected, every attempt is made to preserve the least-affected eye
- Genetic counseling is recommended for parents (and child, at the appropriate time)
- Retinoblastoma tends to recur; follow-up care is important
- Provide emotional support
- Radiation therapy is used for early-stage tumors
- Surgeries: enucleation

ASSESSMENT

Signs and symptoms

Retinoblastoma

- "Cat's eye" reflex (white or yellow reflection from pupil)
- Strabismus
- Retinal detachment
- Pain (late stages)
- Loss of sight (late stages)

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

RETINOBLASTOMA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide care for patient receiving radiation • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs • Observe for complications

- Plan for patient's discharge
  - Prepare teaching plan
    - Encourage genetic counseling for parents; the child should also receive genetic counseling at an appropriate time
    - Emphasize the need for follow-up care
    - Help family contact support groups
    - Teach family to care for prosthesis if necessary
    - Stress the need to protect the remaining eye

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Strabismus — Inability of the eyes to fix in the same direction.

Causes

- Underactive muscles in deviating eye
- Nerve lesion
- Unequal visual acuity

Health care management

- Occlusion of the unaffected eye to strengthen affected eye muscles
- Eye exercises
- Eye glasses
- Surgeries: strabotomy
- Complications: amblyopia (loss of vision in deviating eye)

ASSESSMENT

Signs and symptoms

Strabismus

- Affected eye may deviate in, out, up, or down
- One eye may be the deviating eye, or both eyes may alternate as unaffected and deviating.

ANALYSIS | Report findings to RN who will assimilate information for analysis and nursing care.

STRABISMUS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Provide pre- and postoperative care • Provide emotional support • Keep patient as quiet and calm as possible after surgery
• Continually monitor patient's condition	• Monitor vital signs • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan — Discuss proper use and care of eye patch or eye glasses — Ensure that parents and/or patient understand eye exercises — Emphasize the need to follow physician's instructions to avoid loss of vision in affected eye

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

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DIAGNOSTIC PROCEDURES

Fluorescein test — Staining the cornea with fluorescein to detect ulcerations and abrasions.

Gonioscopy — Using a gonioscope to visualize the angle of the anterior chamber of the eye.

Ishihara color test — A test for color blindness that uses different colors to create patterns; persons who cannot differentiate between the two colors cannot see the pattern

Jaeger's test — Using letters in decreasing sizes to assess near vision.

Perimetry — Measuring a patient's field of vision.

Tonometry — Measuring the intraocular pressure of the eye.

Slit-lamp examination — Examining the eye by means of an intense light shining through a slit.

Snellen test — Using a Snellen chart (a chart of symbols or letters in decreasing sizes) to assess visual acuity.

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SURGICAL PROCEDURES

Cryosurgery — Using extremely cold temperatures to destroy tissues and/or cause scarring; used to treat retinal detachment or embedded eyelash

Diathermy — Using an ultrasonic probe to burn tissue and cause scarring; used to treat retinal detachment

Enucleation — Removal of the eye

Extracapsular extraction — Removal of a cataract that involves removal of only the anterior part of the capsule

Goniotomy — Removal of obstructions in the canal of Schlemm to allow free flow of aqueous humor; used to treat glaucoma

Intracapsular extraction — Removal of a cataract that involves removal of the entire capsule.

Iridotomy — Making an incision in the iris

Keratoplasty — Transplantation of a cornea

Peripheral iridectomy — Excision of part of the iris

Photocoagulation — Using a laser to burn tissue and cause scarring; used to treat retinal detachment

Scleral buckling — Treatment of a detached retina using a splint to hold the retina and choroid together during the healing process

Strabotomy — Surgical correction of strabismus that involves lengthening or shortening optic muscles

Trabeculectomy — Removing tissue from the canal of Schlemm or trabecular meshwork to allow outflow of aqueous humor

Trabeculoplasty — Using a laser beam to create openings in the trabecular meshwork to allow outflow of aqueous humor

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ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH VISION DISORDERS

XIII

Name ______________________________ Score ________

OBJECTIVE 7

Plan care for a patient with a vision impairment.

INTRODUCTION

The incidence of causes of blindness in older persons, such as glaucoma, cataracts, retinal degeneration, and diabetes has increased. Infections and injuries can also cause blindness and occur frequently among older persons. Blindness will continue to increase as the population ages.

Immobility resulting from blindness is a serious effect. People who lose their sight often become slow and insecure because they must rely on aids or other people. Practical nurses must be knowledgeable, supportive, and able to give informed advice to help their patients. Teaching and reinforcing information at every opportunity is an important part of the nurse's responsibility.

Mrs. Perkins is 77 years old. She needs surgery to remove her cataracts, but is not able to undergo cataract surgery because of heart disease. She was admitted to the hospital today to begin a new medication. She is your patient.

DIRECTIONS

Plan care for a patient in your clinical practice or for the patient in the case study above. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Use the information in Objective 2 to help complete a plan of care for your patient. Your instructor will provide a care plan form.

Nursing interventions for her visual impairment should include:

- Communicate the patient's blindness to others.
- Administer prescribed medications.
- Provide proper nutrition and fluids.
- Assist with activity, as ordered.
- Provide for patient comfort.
- Speak in a normal tone of voice.
- Speak to the patient upon entering the room.
- Keep all obstacles out of the pathway to prevent accidents.

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

- Place needed articles within reach, and always in the same place.
- Encourage independence when possible.
- Describe placement and types of food served on the tray or plate.
- Use the patient's name when speaking.
- Do not grab the patient's arm when walking; let the patient take your arm.
- When walking, point out obstacles such as stairs, curbs, sloping walks, and hazards.
- Tell the person when you are leaving the room.
- Refer person to agencies that can provide needed service.
- Encourage the patient to voice fears and anxiety.
- Refer the patient to appropriate community agencies as needed.

ASSIGNMENT SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH VISION DISORDERS

XIII

Name ______________________ Score ________

OBJECTIVE 8

Prepare a teaching plan for a patient who is to undergo a surgical intervention for a vision disorder.

INTRODUCTION

A detached retina is a serious condition that requires surgical intervention to prevent a permanent loss of vision. The patient must be at rest to prevent further detachment and until surgery is performed. The physician usually prescribes bed rest, and eye patches are applied. Anxiety results from concerns over loss of vision and about possible role changes because of diminished sight. The practical nurse must be knowledgeable, supportive, and able to give informed advice about the disease and complications. Reinforcing these aspects at every opportunity is an important part of the nurse's responsibility. The teaching plan should include:

- Teach the patient about the condition and how to cope with the complications that may occur after surgery.
- Caution the patient to ask for help when getting in and out of bed.
- Inform the patient that careful hand washing is important before and after treatment of each eye to avoid infections.
- Teach the patient about ophthalmic medications and proper administration.
- Instruct the patient to avoid touching the face and eyes.
- Explain the surgical procedure and postoperative expectations.
- Teach proper movement to avoid jarring.
- Teach communication techniques to use while the patient's eyes are covered.
- Orient the patient to the surroundings.
- Teach the patient to recognize signs and symptoms that should be reported to the physician.

- Teach the patient to avoid certain activities that can result in serious complications.
- Direct patients and families to agencies that can provide additional assistance.

Mr. Edwards is a 72-year-old who was brought to the emergency room with a detached retina. He has been admitted to the hospital for surgery to repair the retina. Mr. Edwards is your patient.

DIRECTIONS

Plan a teaching session for a patient in your clinical practice or for the patient in the case study above. Use medical-surgical resources to research the condition in more depth and to help you decide on a teaching plan. The information in Objective 5 will also help you prepare a teaching plan.

1. What will you do to prepare the patient for the teaching session?

____

____

____

____

2. What materials, supplies, or equipment will you need?

____

____

____

____

3. Outline the teaching plan below.

____

____

____

____

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records
- Write instructions

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/Development
- Master specific job task/procedure

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH VISION DISORDERS

ASSIGNMENT SHEET 1

Check that students include the following:

- Communicate the patient's blindness to others.
- Administer prescribed medications.
- Provide proper nutrition and fluids.
- Assist with activity, as ordered.
- Provide for patient comfort.
- Speak in a normal tone of voice.
- Speak to the patient upon entering the room.
- Keep all obstacles out of the pathway to prevent accidents.
- Place needed articles within reach, and always in the same place.
- Encourage independence when possible.
- Describe placement and types of food served on the tray or plate.
- Use the patient's name when speaking.
- Do not grab the patient's arm when walking, let the patient take your arm.
- When walking, point out obstacles such as stairs, curbs, sloping walks, and hazards.
- Tell the person when you are leaving the room.
- Refer person to agencies that can provide needed service.
- Encourage the patient to voice fears and anxiety.
- Refer the patient to the appropriate community agencies, if needed.

ASSIGNMENT SHEET 2

1. The nurse should consider the following factors:
   - Are there any distractions in the room?
   - Does the patient need glasses?
   - Does the patient feel uncomfortable or need to use the bathroom?
   - Is there sufficient lighting?
   - What is the patient's level of education?
2. Information about medications, adverse reactions, coping techniques, complications, and information about the disease, pencil and paper for the patient or family member to make notes.

3. Teaching plan should include the following:

   - Caution the patient to ask for help when getting in and out of bed.
   - Inform the patient that careful hand washing is important before and after treatment of each eye to avoid infections.
   - Teach the patient about ophthalmic medications and proper administration.
   - Instruct the patient to avoid touching the face and eyes.
   - Explain the surgical procedure and postoperative expectations.
   - Teach proper movement to avoid jarring.
   - Teach communication techniques to use while the patient's eyes are covered.
   - Orient the patient to the surroundings.
   - Teach the patient to recognize signs and symptoms that should be reported to the physician.
   - Teach the patient to avoid certain activities that can result in serious complications.
   - Direct patients and families to agencies that can provide additional assistance.

JOB SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH VISION DISORDERS

XIII

Name ______________________________ Score ________

OBJECTIVE 9

Apply a sterile dressing to the eye.

INTRODUCTION

Dressings are used to promote healing, prevent patients from touching the eye, absorb secretions, protect the eye, and to regulate or decrease edema. Physicians may change the first dressing and give specific instructions on how the dressings should be applied according to the diagnosis and needs.

EQUIPMENT AND SUPPLIES

- Sterile eye pads
- Paper or silk tape
- Sterile gloves
- 2 pair clean gloves
- Cleansing solution, usually normal saline
- Medication, if ordered

PROCEDURE

Functional Writing
- Complete forms and records

Interactive Communications
- Communicate with clients/customers/patients

Cognitive Activities
- Collect/record information
- Create a finished product

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure as each step is performed.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient.	_____	_____

BEST COPY AVAILABLE

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
3. Wash your hands.	_____	_____
4. Help the patient to a supine position.	_____	_____

⚠ **CAUTION:** Putting pressure on the eye could increase intraocular pressure or put pressure on the optic nerve, causing blindness. Do not put any pressure on the eye.

	Yes	No
5. Put on clean gloves.	_____	_____
6. Loosen the tape of the old dressing by pulling toward the eye.	_____	_____

⚠ **CAUTION:** Sliding dressing across the eye can cause abrasions and spread contamination. Do not slide the dressing across the eye.

	Yes	No
7. Remove the dressing by lifting straight up or out away from the eye.	_____	_____
8. Remove gloves.	_____	_____
9. Wash your hands.	_____	_____
10. Put on clean gloves.	_____	_____
11. Cleanse or medicate the eye as indicated.	_____	_____
12. Remove gloves.	_____	_____
13. Wash your hands.	_____	_____
14. Open the covering that protects the sterile eye pad.	_____	_____
15. Put on sterile gloves.	_____	_____

⚠ **CAUTION:** Putting pressure on the eye could increase intraocular pressure or put pressure on the optic nerve, causing blindness. Do not put any pressure on the eye.

	Yes	No
16. Apply the sterile eye pad.	____	____
17. Remove the gloves.	____	____
18. Apply the tape to secure the pad.	____	____
19. Wash hands before changing the dressing on the other eye.	____	____
20. Repeat steps 5 through 18 for other eye, if necessary.	____	____
21. Clean up:		
a. Put all re-usable equipment in proper place for re-sterilization.	____	____
b. Discard disposable equipment according to universal precautions.	____	____
c. Wash your hands.	____	____
22. Document procedure according to agency requirements.	____	____
Evaluation		
1. Recheck patient in 30 minutes for comfort.	____	____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS ____

____

____

BEST COPY AVAILABLE

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used proper equipment correctly	4	3	2	1
Used universal precautions	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** — Can perform job with no additional training
3 **Moderately Skilled** — Has performed job during training program; limited additional training may be required
2 **Limited Skill** — Has performed job during training program; additional training is required to develop skill
1 **Unskilled** — Is familiar with process, but is unable to perform job

JOB SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH VISION DISORDERS

XIII

Name ______________________________ Score ________

OBJECTIVE 10

Perform an eye irrigation.

INTRODUCTION

Irrigation is done to remove secretions, treat infections, relieve itching, provide moisture on the surface of the eyes, and to irrigate chemical or foreign bodies from the eyes. Physicians may perform the first irrigation, then leave specific instructions on how to perform the irrigation according to the diagnosis and needs.

EQUIPMENT AND SUPPLIES

- Sterile syringe
- Cleansing solution, usually normal saline
- Gloves
- Towel
- Basin
- Plastic sheet

PROCEDURE

Functional Writing
- Complete forms and records

Interactive Communications
- Communicate with clients/customers/patients

Cognitive Activities
- Collect/record information
- Create a finished product

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure as each step is performed.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.	_____	_____
2. Explain procedure to the patient.	_____	_____
3. Wash your hands.	_____	_____
4. Put on gloves.	_____	_____

BEST COPY AVAILABLE

Job Acquisition/ Development

- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
5. Help the patient to a supine position.		
6. Place a towel under the patient's head.		
7. Place the basin beside the patient's head to catch the solution.		
8. Place the plastic sheet around the patient's head to protect the patient's ear from fluid.		
9. Separate the patient's eyelids with the thumb and index finger.		

⚠ **CAUTION:** Do not put any pressure on the eye.

10. Instill the solution into the patient's eye, using an even direct flow from inner to outer canthus.		
11. Repeat the irrigation from steps 7 to 10 until the irrigation is complete.		
12. Dry the area around the eye with cotton balls after the irrigation is complete.		
13. Clean up:		
a. Put all reusable equipment in proper place for re-sterilization.		
b. Discard disposable equipment according to universal precautions.		
c. Wash your hands.		
14. Document procedure according to agency requirements.		
Evaluation		
1. Recheck patient in 30 minutes for comfort.		

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used proper equipment correctly	4	3	2	1
Used universal precautions	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

BEST COPY AVAILABLE

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** — Can perform job with no additional training

3 **Moderately Skilled** — Has performed job during training program; limited additional training may be required

2 **Limited Skill** — Has performed job during training program; additional training is required to develop skill

1 **Unskilled** — Is familiar with process, but is unable to perform job

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH VISION DISORDERS

XIII

Name ______________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the eye to their definitions. Write the correct letter in the blank.

Part 1

_____ 1. A vascular layer between the iris and anterior choroid

_____ 2. Not transparent

_____ 3. A vascular layer of the eye between the sclera and retina

_____ 4. Sensitivity to bright light

_____ 5. Within the eyeball

_____ 6. The colored membrane between the lens and cornea

_____ 7. A tough membrane that covers the white of the eye

a. aphakia
b. blindness
c. blepharospasm
d. choroid
e. ciliary body
f. hyphema
g. intraocular
h. iris
i. O.D.
j. O.S.
k. O.U.
l. opaque
m. ozena
n. photophobia
o. sclera
p. sclerotia

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Part 2

______ 1. Eyelid spasm

______ 2. Abbreviation used to indicate medication to be used in the left eye

______ 3. Abbreviation used to indicate medication to be used in both eyes

______ 4. Absence of the lens of an eye

______ 5. Abbreviation used to indicate medication to be used in the right eye

______ 6. Visual acuity of no better than 20/200 with corrective lenses, or a visual field of less than 20°

______ 7. The presence of blood in the anterior chamber of the eye

a. aphakia

b. blindness

c. blepharospasm

d. choroid

e. ciliary body

f. hyphema

g. intraocular

h. iris

i. O.D.

j. O.S.

k. O.U.

l. opaque

m. ozena

n. photophobia

o. sclera

p. sclerotia

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OBJECTIVE 2

Choose the correct word or phrase to complete statements about common diseases and disorders of the eye. Write the correct letter in the blank.

_____ 1. Glaucoma is characterized by

- a. abnormal softening of the eye
- b. clouded and opaque lens
- c. increased intraocular pressure
- d. inflammation of the uveal tract

_____ 2. One cause of primary glaucoma is

- a. clogged drainage meshwork
- b. increased amount of aqueous humor
- c. retinal detachment
- d. systemic disease

_____ 3. One cause of secondary glaucoma is

- a. blocked tear ducts
- b. congenital defect
- c. overuse of eyes
- d. trauma

_____ 4. Health care management for patients with glaucoma includes

- a. enucleation
- b. keratoplasty
- c. lifelong use of medications
- d. prevent jerky head movements and coughing

_____ 5. Signs and symptoms of open angle glaucoma include

- a. appearance of halos around lights
- b. dilated pupil
- c. gray or white pupil
- d. reddened sclera

_____ 6. Signs and symptoms of closed angle glaucoma include

- a. gradual, progressive vision loss
- b. loss of color vision
- c. photophobia
- d. severe pain

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_____ 7. The teaching plan for patients with glaucoma should include

a. caution the patient against wearing non-gas permeable contact lenses
b. encourage patient to get adequate exercise
c. stress that patient should carry a supply of medication at all times
d. teach the patient eye exercises to help restore lost vision

_____ 8. A cataract is defined as

a. blocked tear duct
b. clouded and opaque lens
c. decreased intraocular pressure
d. increased amount of aqueous humor

_____ 9. The most common cause of cataracts is

a. aging
b. congenital defect
c. disease
d. trauma

_____ 10. Treatment for cataracts includes

a. eye exercises
b. lifelong use of medication
c. surgical removal
d. scleral buckling

_____ 11. Signs and symptoms of cataracts include

a. blurry or hazy vision
b. difficulty adjusting to darkness
c. pain or discomfort in eye
d. sensation of curtain or veil being pulled over eye

_____ 12. The teaching plan for patients with cataracts should include

a. advise the patient that it may take several months for vision to be restored to normal
b. caution the patient to avoid rubbing eye, bending at waist, or shampooing hair for period specified by physician
c. instruct the patient how and when to use medications
d. teach use and care of cataract glasses or contact lenses

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_____ 13. Retinal detachment is defined as

a. separation of the retina from the cornea
b. holes or tears in the outer layer of the retina
c. separation of the two layers of the retina
d. desquamation of the retina

_____ 14. Retinal detachment may be caused by

a. infection
b. glaucoma
c. systemic disease
d. trauma

_____ 15. Health care management for patients with retinal detachment includes

a. implant of an artificial lens
b. lifelong use of medication
c. prevent jerking head movements, vomiting, and coughing
d. treat underlying condition

_____ 16. Signs and symptoms of retinal detachment include

a. "floaters" in field of vision
b. loss of peripheral vision
c. photophobia
d. sudden pain

_____ 17. When promoting healing for the patient with retinal detachment, you will

a. apply warm, moist compresses
b. position patient as ordered by physician
c. cover unaffected eye if necessary
d. use protective eye cup to prevent further injury

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OBJECTIVE 3 **Choose the correct word or phrase to complete statements about infectious diseases and disorders of the eye.** Write the correct letter in the blank.

_____ 1. Hordeolum is defined as

a. infection of the eyelash follicle or sebaceous gland of the eyelid
b. inflammation of the conjunctiva
c. inflammation of the eyelid
d. inflammation of the uveal tract

_____ 2. Health care management for hordeolum includes

a. cool compresses
b. enucleation
c. topical anesthetics
d. warm, moist compresses

_____ 3. Signs and symptoms of hordeolum include

a. blurred vision
b. lacrimation
c. reddened conjunctiva
d. small, localized abscesses

_____ 4. Blepharitis is defined as

a. infection of the eyelash follicle or sebaceous gland of the eyelid
b. inflammation of the conjunctiva
c. inflammation of the eyelid
d. inflammation of the uveal tract

_____ 5. Blepharitis may be caused by

a. allergic reaction
b. external irritants
c. staphylococcus infection
d. trauma

_____ 6. Health care management for patients with blepharitis includes

a. cool compresses
b. eye patch and rest
c. keratoplasty
d. antibiotics

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_____ 7. Signs and symptoms of blepharitis include

a. blepharospasm
b. edema of eyelid
c. lacrimation and crusting
d. pruritus

_____ 8. Conjunctivitis is defined as

a. infection of the eyelash follicle or sebaceous gland of the eyelid
b. inflammation of the conjunctiva
c. inflammation of the eyelid
d. inflammation of the uveal tract

_____ 9. Conjunctivitis may be caused by

a. allergic reaction
b. exposure to bright light
c. psoriasis
d. seborrhea

_____ 10. Health care management for patients with conjunctivitis includes

a. cool compresses
b. eye patch and rest
c. keratoplasty
d. antibiotics

_____ 11. Signs and symptoms of conjunctivitis include

a. blepharospasm
b. blurred vision
c. pain
d. small, localized abscesses

_____ 12. The teaching plan for patients with hordeolum, blepharitis, or conjunctivitis should include

a. advise the patient that it may take several months for vision to be restored to normal
b. emphasize the need to rest the eyes
c. teach family to care for prosthesis if necessary
d. warn patient against touching or rubbing eyes

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______ 13. Uveitis is defined as

a. inflammation of the conjunctiva
b. inflammation of the eyelid
c. inflammation of the iris, ciliary body, and choroid
d. inflammation of the cornea

______ 14. Causes of uveitis include

a. adverse reaction to medication
b. autoimmune disorder
c. external irritants
d. psoriasis

______ 15. Health care management for uveitis includes

a. analgesics
b. enucleation
c. eye patch and rest
d. lifelong medication use

______ 16. Signs and symptoms of uveitis include

a. eye pain or discomfort
b. pruritus
c. reddened conjunctiva
d. small, localized abscesses

______ 17. Keratitis is defined as

a. inflammation of the conjunctiva
b. inflammation of the eyelid
c. inflammation of the iris, ciliary body, and choroid
d. inflammation of the cornea

______ 18. Health care management for keratitis includes

a. analgesics
b. cover unaffected eye to prevent movement
c. eye patch and rest for affected eye
d. irrigation with saline solution

______ 19. Signs and symptoms of keratitis include

a. blurred vision
b. crusting
c. photophobia
d. reddened conjunctiva

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_____ 20. The teaching plan for patients with keratitis includes

a. advise patient that lost vision will never be restored, but further vision loss can be prevented
b. inform patients needing keratoplasty that they will be placed on a waiting list
c. instruct patient to carry supply of medicine at all times
d. warn patient against rubbing or touching eyes

OBJECTIVE 4

Choose the correct word or phrase to complete statements about traumatic injures to the eye. Write the correct letter in the blank.

_____ 1. Health care management for a penetrating injury to the eye includes

a. anti-inflammatory agents
b. cover affected eye with protective eye cup
c. warm, moist compresses
d. use pressure bandage to prevent movement of eyelid

_____ 2. Signs and symptoms of a penetrating injury to the eye include

a. blepharospasms
b. foreign object visible in eye
c. photophobia
d. severe pain

_____ 3. Emergency treatment for a chemical injury to the eye includes

a. cover uninjured eye to prevent movement of injured eye
b. prevent patient from bending over at the waist
c. irrigate the affected eye with large amounts of clear water for at least 15 minutes
d. use pressure bandage to prevent movement of eyelid

_____ 4. Actinic injury is defined as

a. damage to the cornea from ultraviolet rays
b. direct blow to the eye with a sharp object
c. scrape that affects the superficial layers of the eye
d. thermal burn to the cornea

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_____ 5. Health care management for patients with actinic injury to the eye includes

a. cover affected eye with protective eye cup
b. irrigate the affected eye with large amounts of clear water for at least 15 minutes
c. provide pain relief
d. use fluorescein stain to detect injured areas

_____ 6. Signs and symptoms of actinic injury include

a. blurred vision
b. pain that develops several hours after exposure to ultraviolet light
c. photophobia
d. tearing and crusting

_____ 7. Abrasion of the eye may be caused by

a. acid or alkali solutions
b. excessive exposure to direct sunlight
c. improper use of contact lenses
d. misuse of over-the-counter eye drops

_____ 8. Health care management for the patient with an abrasion of the eye includes

a. irrigate the affected eye with large amounts of clear water for at least 15 minutes
b. keratoplasty
c. prevent patient from bending over at the waist
d. use pressure bandage to prevent movement of eyelid

_____ 9. Signs and symptoms of abrasion of the eye include

a. bleeding
b. blurred vision
c. crusting
d. tearing

_____ 10. A laceration of the eye is characterized by

a. affecting the superficial layers of the eye
b. causing ulceration of the cornea
c. removing tissue from the eye or surrounding skin
d. swelling and discoloration of the surrounding skin

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_____ 11. Health care management for a patient with a laceration of the eye includes

a. do not use pressure to stop bleeding
b. cover unaffected eye to prevent movement of injured eye
c. prevent patient from bending over at the waist
d. use fluorescein stain to detect injured areas

_____ 12. Signs and symptoms of laceration of the eye include

a. bleeding
b. blurred vision
c. pain
d. swelling

_____ 13. A contusion is defined as a

a. direct blow to the eye with a sharp object
b. bruise that can cause bleeding and a hematoma
c. scrape that removes part of the cornea
d. tear that removes tissue from the eye or surrounding skin

_____ 14. Emergency treatment for a contusion of the eye includes

a. irrigate the injured eye with large amounts of water for at least 15 minutes
b. prevent the patient from bending over at the waist
c. put a protective eye cup over the injured eye
d. use cold compress to help stop bleeding

_____ 15. Signs and symptoms of a contusion of the eye include

a. dark discoloration around eye
b. lacrimation and crusting
c. loss of vision
d. photophobia

May be photocopied for student use

OBJECTIVE 5 **Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the eye.** Write the correct letter in the blank.

_____ 1. Cora asks you about the risks involved with the surgery she is to have tomorrow. The BEST procedure *at this time* is to ______.

a. reassure her that medications are labeled "ophthalmic" and will be administered as prescribed
b. explain all treatments and care to her before performing them
c. encourage her to express feelings of fear and anxiety
d. explain and obtain a completed informed consent prior to the procedure

_____ 2. Robert wants to know how he will understand what is being said to him if he has eye patches on. The BEST procedure *at this time* is to ______.

a. teach and assist him with ambulation techniques
b. orient him to the surroundings with a tour of the unit
c. explain all the equipment in the room and environment
d. teach communication techniques to use

_____ 3. Donna wants to know how you will monitor her condition. The BEST procedure *at this time* is to ______.

a. reinforce that vital signs will be taken often before and after surgery, and complications will be noted and reported
b. reassure her that medications are labeled ophthalmic and will be administered as prescribed
c. reassure her that caution will be used to prevent pressure on the eyes when she is moved
d. reassure her that you will wash your hands before and after each treatment of each eye

May be photocopied for student use.

_____ 4. Adam tells you that he had serious complications after his last surgery, and he wants to know how to avoid any problems. The BEST procedure *at this time* is to _______.

a. increase his understanding of not using any bright lights
b. reassure him that you will wash your hands before and after each treatment of each eye
c. instruct him and his family as to home care
d. explain that you will assist at mealtimes

OBJECTIVE 6

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the eye. Write the correct letter in the blank.

_____ 1. Retinoblastoma is usually diagnosed before the age of

a. 6 months
b. 1 year
c. 2 years
d. 4 years

_____ 2. Health care management for the patient with retinoblastoma includes

a. antibiotics
b. enucleation
c. keratoplasty
d. lifelong medication use

_____ 3. Signs and symptoms of retinoblastoma include

a. "cat's eye" reflex
b. lacrimation and crusting
c. photophobia
d. swelling and discoloration around eye

_____ 4. The teaching plan for patients with retinoblastoma includes

a. stress the need to continue taking medication, even if symptoms disappear
b. emphasize the need for follow-up care
c. instruct patient and/or parent to care for contact lenses
d. insure that patient and/or parent understand eye exercises

May be photocopied for student use

_____ 5. Strabismus is defined as

a. abnormal movement of both eyes
b. loss of sight in one eye
c. inability of the eyes to fix in the same direction
d. inward turning of both eyes

_____ 6. Strabismus may be caused by

a. excessive use of eye muscles
b. malignancy
c. uncorrected myopia
d. underactive muscles in deviating eye

_____ 7. Health care management for the patient with strabismus includes

a. eye exercises
b. excision of tumor
c. occlusion of affected eye to rest eye muscles
d. limit reading and television

_____ 8. Signs and symptoms of strabismus include

a. blurred vision
b. failure of eyes to fix in same direction
c. inability to focus on distant objects
d. photophobia

_____ 9. The teaching plan for patients with strabismus should include

a. emphasize the need to limit reading and television
b. emphasize the need to follow physician's instructions to avoid loss of vision in the good eye
c. stress the need to continue taking medication, even if symptoms disappear
d. teach patient or parents how and when to use medications

NOTE: Objectives 7-10 are evaluated on the Job Sheets/Assignment Sheets in this unit. If you have not completed these components, see your instructor.

May be photocopied for student use

WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH VISION DISORDERS . XIII

OBJECTIVE 1

Part 1		Part 2	
1.	e	1.	c
2.	l	2.	j
3.	d	3.	k
4.	n	4.	a
5.	g	5.	i
6.	h	6.	b
7.	o	7.	f

OBJECTIVE 2

1. c
2. a
3. d
4. c
5. a
6. d
7. c
8. b
9. a
10. c
11. a
12. d
13. c
14. d
15. c
16. a
17. b

OBJECTIVE 3

1. a
2. d
3. d
4. c
5. c
6. d
7. c
8. b
9. a
10. d
11. c
12. d
13. c
14. b
15. b
16. a
17. d
18. c
19. c
20. b

OBJECTIVE 4

1. b
2. b
3. c
4. a
5. c
6. b
7. c
8. d
9. d
10. c
11. a
12. c
13. b
14. d
15. a

OBJECTIVE 5

1. d
2. d
3. a
4. c

OBJECTIVE 6

1. d
2. b
3. a
4. b
5. c
6. d
7. a
8. b
9. b

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH EAR DISORDERS

XIV

INTRODUCTION

There are different types of hearing loss. Conductive hearing loss results when sound waves are unable to travel from the outer to the inner ear. Surgical or medical correction of the problem may be used to treat this type of impairment. Patients benefit from hearing aids because, in most instances, amplification of sound vibrations is all that is required. Sensory hearing loss results when a disease of the inner ear or nerve pathways produces a malfunction in the inner ear, auditory nerve, or auditory center in the brain. Sound waves are carried through the external and middle ear but are not decoded accurately in the inner ear. Many of these patients also benefit from the use of hearing aids.

Hearing loss can vary from slight to complete. When speaking to a patient with hearing loss, the nurse should get the person's attention, speak face-to-face, and speak clearly without straining or shouting.

Patients who use hearing aids may want to remove them when resting. The nurse should encourage patients who have hearing aids to wear them when necessary, make sure they are turned on, and test the batteries. Nurses should become familiar with hearing aids and be able to test and place them for patients who cannot do it themselves. Instructions regarding care and storage are also essential. Hearing aids are expensive, and should be handled with care.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the ear and associated nursing processes. In addition, you will demonstrate these competencies by completing Assignment Sheets, a Job Sheet, and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit you will be able to:

1. Match terms associated with diseases and disorders of the ear to their correct definitions.

2. Choose the correct word or phrase to complete statements about diseases and disorders of the external ear.

3. Choose the correct word or phrase to complete statements about diseases and disorders of the middle ear.

4. Choose the correct word or phrase to complete statements about diseases and disorders of the inner ear.

5. Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the ear.

6. Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the ear.

7. Prepare a teaching plan for a patient who is to undergo a surgical intervention for a hearing disorder. (Assignment Sheet 1)

8. Plan care for a patient with a hearing impairment. (Assignment Sheet 2)

9. Perform an ear irrigation. (Job Sheet)

SUGGESTED ACTIVITIES

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH EAR DISORDERS

XIV

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objective 1, basic information that supports the rest of the unit;

  Part 2 — Objectives 2-4, the first three groupings, including diseases and disorders of the external, middle, and inner ear; and

  Part 3 — Objectives 5 and 6, the next two groupings, including pre- and postoperative teaching instructions and pediatric diseases and disorders of the ear.
- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a guest speaker to discuss diseases and disorders of the ear.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet, and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.
- Obtain models and large pictures of the ear.
- Make a poster of the ear.
- Make a bulletin board showing the ear.

- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration

  - Assist students to conduct a chapter service project on the ear.

  - Develop objectives for service project and identify a theme.

  - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.

  - Plan a community or school health project that involves disseminating pamphlets about care of patients with diseases and disorders of the ear.

  - Develop and/or participate in a community teaching project that involves diseases and disorders of the ear.

- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.

- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with diseases and disorders of the ear to their correct definitions.

- Discuss terms associated with the ear.

- Have students play reinforcement games and work crossword puzzles using terms.

- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about diseases and disorders of the external ear.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the external ear.

- Have students share ideas that might be helpful in evaluating diseases and disorders of the external ear.

- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the external ear.

- Discuss other diseases and disorders of the external ear not mentioned in this unit.

Objective 3: Choose the correct word or phrase to complete statements about diseases and disorders of the middle ear.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the middle ear.

- Have students share ideas that might be helpful in evaluating diseases and disorders of the middle ear.

- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the middle ear.

- Discuss other diseases and disorders of the middle ear not mentioned in this unit.

- Have students complete Assignment Sheet 1.

Objective 4: Choose the correct word or phrase to complete statements about diseases and disorders of the inner ear.

- Have students share relevant incidents about friends or family members who have problems related to diseases and disorders of the inner ear.

- Have students share ideas that might be helpful in evaluating diseases and disorders of the inner ear.

- Discuss ways in which nurses can improve the care of patients with diseases and disorders of the inner ear.

- Discuss other diseases and disorders of the inner ear not mentioned in this unit.

- Discuss balance and dizziness, and how they are related to the inner ear.

- Have students complete Assignment Sheet 2.

Objective 5: Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the ear.

- Have students tell about friends or family members who have experienced surgical procedures for the ear.
- Have a hearing specialist provide an auditory screening demonstration.

Objective 6: Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the ear.

- Have students share relevant incidents about friends or family members who have problems related to pediatric diseases and disorders of the ear.
- Have students share ideas that might be helpful in evaluating pediatric diseases and disorders of the ear.
- Discuss ways in which nurses can improve the care of patients with pediatric diseases and disorders of the ear.
- Discuss other pediatric diseases and disorders of the ear not mentioned in this unit.

APPLICATION

Objective 7: Prepare a teaching plan for a patient who is to undergo a surgical intervention for a hearing disorder. (Assignment Sheet 1)

- Use Assignment Sheet 1 to give students an opportunity to practice ideas that help when they teach patients who undergo a surgical intervention for a hearing disorder.

Objective 8: Plan care for a patient with a hearing impairment. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give students an opportunity to practice ideas that help when they care for a patient with a hearing impairment.
- Let students wear earplugs to simulate hearing impairment.
- Provide a care plan form for students' use.

Objective 9: Perform an ear irrigation. (Job Sheet)

- Use the Job Sheet to give students hands-on experience performing an ear irrigation.

- Use a mannequin to practice and demonstrate procedures in the classroom.

EVALUATION

Pretest

- Give Written Test as pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Skill Test

- Evaluate students on Assignment Sheet activities.
- Evaluate students on Job Sheet activities.
- Complete appropriate section of Competency Profiles.
- Reteach and reevaluate if necessary.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.
- Complete appropriate sections of Competency Profiles.
- Reteach and retest if necessary.
- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.

- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.
- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.
- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *University of California Berkeley Wellness Letter*, 48 Shattuck Square, Suite 43, Berkeley, CA. 94704-1140.

UNIT REFERENCES

- Betz, Cecily Lynn and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.
- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.
- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St. Louis: Mosby-Year Book, Inc., 1991.
- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.
- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.
- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.
- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.
- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C.V. Mosby Company, 1990.

INFORMATION SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH EAR DISORDERS

XIV

OBJECTIVE 1

Match terms associated with diseases and disorders of the ear to their correct definitions.

- **cerumen** — Waxy secretion from the ear canal, commonly called "ear wax"
- **chronic mastoiditis** — A chronic inflammation of the mastoid that may be a complication of, or occur with, chronic otitis media
- **cochlea** — Coiled, cone-shaped organ in the inner ear
- **labyrinth** — Rigid capsule in the inner ear consisting of three semicircular canals, vestibule, and cochlea
- **mastoid** — Mass of cells in the middle ear responsible for adjusting to pressure changes
- **ossicles** — Three small movable bones called the *malleus* (hammer), *incus* (anvil), and *stapes* (stirrup)
- **otalgia** — Earache
- **oval window** — The footplate of the stapes
- **pinna** — The external structure of the ear that consists of skin-covered cartilage extending to the lobe
- **round window** — An exit for sound vibrations from the inner ear
- **tinnitus** — Ringing in the ear
- **tympanic membrane** — The resonant wall of the tympanic cavity in the middle ear, commonly called the "eardrum"
- **vertigo** — Sensation of spinning

OBJECTIVE 2 **Choose the correct word or phrase to complete statements about diseases and disorders of the external ear.**

Description and etiology

External otitis ("swimmer's ear") — An acute or chronic inflammation of the external ear. Swimming often leads to external otitis when protective cerumen and lipids are washed out of the ear, creating a pathway for infection.

Causes

- Bacterial infection
- Viral infection
- Fungal infection
- Allergic reaction
- Trauma

Health care management

- Prevention is important – swimmers should use alcohol or special ear drops to dry their ears
- Use a wick to keep medication in the ear canal
- Apply heat for pain relief
- Irrigation of ear canal
- Medications: analgesics, corticosteroids, antibiotics, antifungal agents
- Complications: malignant external otitis (rare, seen in persons with debilitating disease)

ASSESSMENT **Signs and symptoms**

External otitis

- Pain in affected ear, especially when chewing or if pinna is gently pulled
- Yellow or watery discharge from ear
- Pruritus
- Redness
- Feeling of fullness in ear
- Edema of ear canal
- Loss of hearing

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

EXTERNAL OTITIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Irrigate ear • Apply heat to ear
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Discuss preventive measures – Caution patient against inserting objects into ear, including cotton swabs – Teach patient how and when to use ear drops

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

Description and etiology

Obstructions — Foreign objects or cerumen obstruct the ear canal.

Causes

- Insects
- Impacted cerumen

- Objects inserted into ear

  - Beads
  - Beans
  - Coins

Health care management

- Gently irrigate ear to remove object
- Irrigating with water may cause insects or organic matter to swell; use oil to smother and remove insects or to remove organic matter
- Specially trained persons may use instruments to remove object, if necessary
- Complications: perforation of tympanic membrane, trauma to ear canal

ASSESSMENT

Signs and symptoms

Obstructions

- Loss of hearing
- Pain
- Tinnitus
- Pulling on ear (children)

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

OBSTRUCTIONS

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions
Check medication record	
Collect equipment	
Promote healing	Gently irrigate ear Assist with removal of object
Continually monitor patient's condition	Monitor vital signs Observe for complications

• Plan for patient's discharge	• Prepare teaching plan – Discuss preventive measures, such as using drops to soften and remove cerumen regularly – Discuss "childproofing" the home to put objects that could be placed in ears out of reach

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NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about diseases and disorders of the middle ear.

Description and etiology

Perforation of tympanic membrane — A tear in the eardrum from injuries or frequent infections. Repeated perforations can cause scarring of the eardrum and progressive hearing loss.

Causes

- Infection
- Foreign objects
- Blast injury
- Blow to ear
- Burns

Health care management

- Many perforations heal spontaneously
- Medications: oral antibiotics
- Surgeries: myringoplasty, tympanoplasty

ASSESSMENT

Perforation of tympanic membrane

Signs and symptoms

- Loss of hearing
- Pain

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

PERFORATION of TYMPANIC MEMBRANE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Teach patient to use medications – Caution against instilling anything into the ear unless prescribed by physician

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION	• Re-assess patient, report any changes. • Assess vital signs again, report any changes. • Contribute to plan of care update.
Description and etiology	**Otosclerosis** — A gradual formation of new, spongy bone tissue around the stapes that prevents vibrations from reaching the inner ear, resulting in a hearing loss.
Causes	• Unknown (familial tendency)
Health care management	• Surgeries: stapedectomy
ASSESSMENT	**Signs and symptoms**
Otosclerosis	• Progressive hearing loss • Tinnitus
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

OTOSCLEROSIS

PLAN	IMPLEMENTATION
Check doctor's orders	
Plan for documentation	Document all aspects of patient care
Plan for safety	Use universal precautions
Check medication record	
Collect equipment	
Promote healing	Provide pre- and postoperative care Keep postoperative patients flat in bed and quiet for 48 hours
Continually monitor patient's condition	Monitor vital signs Observe for complications
Plan for patient's discharge	Prepare teaching plan – Patients should avoid coughing, sneezing, and violent head movements as recommended by physician – Patients may need to limit physical activities – Discuss dressing changes

NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 4 **Choose the correct word or phrase to complete statements about diseases and disorders of the inner ear.**

Description and etiology **Labyrinthitis** — An acute or chronic inflammation of the labyrinth.

Causes

- Viral infection
- Certain drugs or foods
- Use of tobacco or alcohol
- Bacterial infection

Health care management

- Treat underlying condition
- Bed rest
- Medications: antibiotics, antiemetics, histamines, sedatives, antivertiginous drugs

ASSESSMENT

Labyrinthitis

Signs and symptoms

- Vertigo
- Nausea and vomiting
- Headache
- Loss of hearing

Description and etiology

Ménière's disease (endolymphatic hydrops) — Excessive accumulation of endolymph fluid in the structures of the inner ear.

Causes

- Unknown

Health care management

- Treatment is aimed at decreasing vertigo attacks
- Restrict fluid intake and provide low-sodium diet
- Provide emotional support
- Provide calm, quiet environment
- Patients should stop smoking, if applicable
- Medications: diuretics, antiemetics, anticholinergics, vasodilators, antihistamines, antivertiginous drugs
- Surgeries: labyrinthectomy, vestibular nerve section, endolymphatic shunt

ASSESSMENT

Ménière's disease

Signs and symptoms

- Tinnitus
- Hearing loss
- Sudden attacks of vertigo, nausea, vomiting, headache
- Attacks may last several hours

LABYRINTHITIS and MÉNIÈRE'S DISEASE

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Provide emotional support
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Use side rails to protect patient from falling out of bed • Monitor ambulatory patient for dizziness or vertigo
• Plan for patient's discharge	• Prepare teaching plan – Discuss avoidance of possible precipitating factors such as glaring lights, jerking motions, loud noises, stimulants, and certain foods – Instruct patient to immediately sit down if attack occurs – Instruct patient to avoid reading during periods of vertigo or tinnitus – Background noise such as soft music or "white noise" may help patients deal with tinnitus

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the ear.

Teaching interventions and instructions for surgical procedures:

- Reinforce the explanation of the procedure with an explanation or drawing.

NOTE: Encourage patient not to sneeze, cough, or blow nose to avoid pressure and surgical complications.

- Assess patient's teaching needs about the procedure.
- Obtain a completed informed consent prior to the procedure.
- Assure patients that nursing personnel will be nearby to provide assistance when needed.
- Teach patients to maintain the correct postoperative position as indicated for the surgery and patient's condition.

NOTE: Position bed flat or slightly elevated. The operative ear should be up to prevent displacement of graft or prosthesis; or if indicated, the operative ear should be positioned down to facilitate drainage.

- Inform patients that the operative site will be observed for drainage or bleeding.
- Explain that aseptic technique will be used when changing dressings.
- Instruct patients to breathe slowly and deeply through mouth during attacks of nausea to avoid vomiting.
- Reinforce that vital signs will be taken often before and after surgery.

NOTE: Temperature elevation, chills, stiff neck, nausea, and vomiting are surgical complications.

- Tell patients that you will observe for and report any signs of temporary or permanent facial paralysis.

NOTE: Facial paralysis may be caused by nerve damage, edema, or the pressure of dressings. It may be necessary for the surgeon to loosen or adjust dressings.

- Reinforce that analgesics, sedatives, and oral medications will be administered as ordered.
- Reassure patients that you will speak slowly and distinctly in a normal tone of voice.
- Tell patients that you will speak face to face.
- Explain all procedures simply and carefully.
- Instruct patients and family on home care.

OBJECTIVE 6

Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the ear.

Description and etiology

Acute otitis media — An inflammation of the middle ear. Children are particularly susceptible to otitis media because their eustachian tubes are short and straight. Infectious organisms enter through the eustachian tube or a perforated eardrum and travel to the internal ear structures. Acute otitis media often follows an upper respiratory infection.

Causes

- Bacterial infection
- Allergies
- Viral infection

Health care management

- Apply heat or cold to affected ear
- Drainage is infectious – warn patient against touching ear or drainage
- Use cold cream or petroleum jelly to protect skin surrounding ear from drainage
- Medications: antibiotics, analgesics, decongestants, sedatives
- Surgeries: myringotomy
- Complications: chronic otitis media, mastoiditis, meningitis, brain abscess, cholesteatoma

ASSESSMENT

Acute otitis media

Signs and symptoms

- Severe, throbbing pain
- Feeling of "fullness" in ear
- Fever
- Dizziness
- Hearing loss
- Tinnitus
- Rubbing or pulling ear

Description and etiology	**Chronic otitis media** — An inflammation of the middle ear from organisms that are resistant to antibiotics or from virulent strains of organisms. They cause repeated infections that lead to perforation of the eardrum.
Causes	• Same as acute otitis media
Health care management	• Prevent complications • Keep ear canal clear of debris and drainage • Medications: antibiotics, steroids • Surgeries: mastoidectomy, tympanostomy ventilating tube • Complications: cholesteatoma, labyrinthitis, mastoiditis, meningitis
ASSESSMENT	**Signs and symptoms**
Chronic otitis media	• Slight hearing loss • Foul drainage • Pain
ANALYSIS	Report findings to RN who will assimilate information for analysis and nursing care.

ACUTE and CHRONIC OTITIS MEDIA

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide pre- and postoperative care • Apply heat or cold as prescribed • Keep infant sitting upright during feedings
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Observe for dizziness in ambulatory patients

• Plan for patient's discharge	• Prepare teaching plan – Emphasize that the patient must continue taking medications until finished, even if symptoms subside – Discuss preventive measures

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NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

DIAGNOSTIC PROCEDURES

Audiometry – Testing a patient's hearing acuity using sounds of different intensities, frequencies, and tones.

Otoscopy – An instrument called an *otoscope* is used to visualize the tympanic membrane and outer ear.

Rinne test – A test that uses a tuning fork to evaluate hearing through air conduction and bone conduction.

Weber test – A test that uses a tuning fork to detect hearing loss.

SURGICAL PROCEDURES

Tympanoplasty — Surgical repair of the tympanic membrane

Myringotomy — Incision into the tympanic membrane to relieve pressure and drain fluids or pus

Mastoidectomy — Removal of infected or diseased tissue from the mastoid area in the middle ear

Stapedectomy — Removal of the stapes and replacement with a prosthesis

Tympanostomy ventilating tube — Insertion of a small plastic tube into the middle ear through an incision in the eardrum

ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH EAR DISORDERS

Name ______________________________ Score ________

OBJECTIVE 7

Prepare a teaching plan for a patient who is to undergo surgical intervention for a hearing disorder.

INTRODUCTION

Patients with a hearing loss experience difficulty communicating. They may feel anger, frustration, anxiety, and insecurity. They often misinterpret communication. Adjusting to this handicap can be difficult. The practical nurse needs to find alternative methods of communication.

- Give the patient a pencil and paper to write messages.
- Provide adequate lighting so the patient can see you clearly.
- Rephrase or write out the message if the patient does not understand.
- Have the patient write an answer if you cannot understand the patient's method of communication.
- Make a note of the hearing disorder in the patient's chart.

The practical nurse must be knowledgeable, supportive, and able to give informed advice to help the patient. Teaching and reinforcing information at every opportunity is an important part of the nurse's responsibility.

Alison Gilmore is 48 years old. She had otosclerosis for many years. She wears a hearing aid, but is willing to undergo a stapedectomy to improve her ability to hear and to relieve her tinnitus. She is hopeful that surgery will correct this symptom and improve her hearing.

DIRECTIONS

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

In this assignment you are given a case study. Plan a teaching session for the patient in the case study or a patient from your clinical practice. Use additional medical-surgical resources to research the condition in more depth and to help you decide on a teaching plan. The information in Objective 3 will also help you prepare a teaching plan.

- Teach the patient about the condition.

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records
- Write instructions

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

- Teach the patient appropriate communication techniques.
- Teach the patient and family about proper diet and fluids.
- Teach the patient to avoid activities that might aggravate the condition.
- Discuss signs and symptoms that should be reported to the physician.
- Direct patients and families to community resources that may provide additional assistance, such as a social worker or audiologist.
- Teach the patient to increase background noises such as music to distract from buzzing or ringing in the ears.
- Encourage the patient to seek assistance when walking if dizziness is present.
- Teach the patient to protect self from injury if dizziness is present.

1. What will you do to prepare the patient for the teaching session?

2. What materials, supplies, or equipment will you need?

3. Outline the teaching plan below.

ASSIGNMENT SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH EAR DISORDERS

XIV

Name ______________________________ Score ________

OBJECTIVE 8 **Plan care for a patient with a hearing impairment.**

INTRODUCTION

Because patients with hearing loss have difficulty communicating, the nurse should use specific guidelines when caring for the hearing-impaired patient. Teach and use communication techniques when caring for a patient with hearing problems. The practical nurse must be knowledgeable, supportive, and able to give informed advice to help patients. Teaching and reinforcing information at every opportunity is an important part of the nurse's responsibility.

Gretta Milen is a 55-year-old who has Ménière's disease. Attempts to stabilize her hearing have been successful, but she does continues to have difficulty hearing, especially during episodes. She plays tapes at night to distract her from the buzzing and ringing in her ears. This allows her to sleep. She has been admitted into the hospital for hip surgery.

DIRECTIONS

Plan care for a patient in your clinical practice or for the patient in the case study above. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Use the information in Objective 4 to help complete a plan of care for your patient. Your instructor will provide a care plan form.

Nursing interventions include:

- Do a complete assessment
- Monitor vital signs
- Record intake and output
- Administer prescribed medications
- Provide proper nutrition and fluids
- Assist with activity, as ordered
- Provide for patient comfort
- Speak face to face, slowly and distinctly in a normal tone of voice
- Ask the patient to repeat information back to you to ensure comprehension
- Explain procedures simply and carefully

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records
- Write instructions

Life Science
- Investigate health issues

Cognitive Activities
- Collect/record information
- Create a finished product

Job Acquisition/ Development
- Master specific job task/procedure

- Return to patient's room frequently to offer assistance and reassurance
- Rephrase or write out the message if the patient does not understand
- Have the patient write answers if you cannot understand the patient's method of communication

ASSIGNMENT ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH EAR DISORDERS XIV

ASSIGNMENT SHEET 1

1. The nurse should consider the following factors:
   - Are there any distractions in the room?
   - Does the patient need glasses?
   - Does the patient feel uncomfortable or need to use the bathroom?
   - Is there sufficient lighting?
   - What is the patient's level of education?

2. - Printed information about medications, adverse reactions, coping techniques, and complications
   - Information about the disease and diet
   - Pencil and paper for the patient to make notes

3. The teaching plan should include the following:
   - Teach the patient about the condition and how to recognize signs and symptoms that should be reported to the nurse or physician.
   - Teach the patient appropriate communication techniques.
   - Teach the patient and family about proper diet and fluids.
   - Teach the patient to avoid activities that might aggravate the condition.
   - Discuss signs and symptoms that should be reported to the physician.
   - Direct patients and families to community resources that may provide additional assistance, such as a social worker or audiologist.
   - Teach the patient to increase background noise such as music to distract from buzzing or ringing in the ears.
   - Encourage the patient to seek assistance when walking if dizziness is present.
   - Teach patient to protect self from injury if dizziness is present.

ASSIGNMENT SHEET 2

Care plan should meet the following criteria:

- Nursing process followed
  - Assessment
  - Analysis (under direction of RN)
  - Planning
  - Implementation
  - Outcome/evaluation (under direction of RN)
- Nursing actions/interventions include discharge planning
- Check that students include the following:
  - Do a complete assessment
  - Monitor vital signs
  - Record intake and output
  - Administer prescribed medications
  - Provide proper nutrition and fluids
  - Assist with activity, as ordered
  - Provide for patient comfort
  - Speak face to face, slowly and distinctly in a normal tone of voice
  - Ask the patient to repeat information back to you to ensure comprehension
  - Explain procedures simply and carefully
  - Return to patient's room frequently to offer assistance and reassurance
  - Rephrase or write out the message if the patient does not understand
  - Have the patient write answers if you cannot understand the patient's method of communication

JOB SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH EAR DISORDERS

XIV

Name ______________________________ Score ________

OBJECTIVE 9

Perform an ear irrigation.

INTRODUCTION

Irrigating the ear involves instilling a solution in the ear canal to remove discharge, a foreign body, or impacted cerumen. The procedure is done carefully to avoid causing discomfort or to prevent irritation and tissue damage. If the tympanic membrane is ruptured, irrigation can contaminate the internal structures of the ear. It should not be done if the patient has a cold, fever, infection, or tympanic membrane injury or rupture.

EQUIPMENT AND SUPPLIES

- Basin
- Otoscope
- 2 towels
- Clean gloves
- Irrigating syringe
- Cotton-tipped applicators
- Gauze sponges
- Prescribed irrigating solution

PROCEDURE

Functional Writing
- Complete forms and records

Interactive Communications
- Communicate with clients/customers/patients

Cognitive Activities
- Collect/record information
- Create a finished product

Assessment and analysis	Yes	No
1. Check physician's orders.	_____	_____
2. Identify patient.	_____	_____
3. Observe patient's condition; chart any changes.	_____	_____
Planning		
1. Reassure patient and explain procedure as each step is performed.	_____	_____
2. Prepare for procedure.	_____	_____
Implementation		
1. Collect equipment.		

Job Acquisition/ Development
- Master specific job task/procedure
- Practice good work habits/attitudes

	Yes	No
2. Explain procedure to the patient.		
3. Wash hands.		
4. Put on gloves.		
5. Help the patient to a comfortable sitting position.		
6. Tilt the patient's head slightly forward and toward the affected side.		
7. Check the auditory canal with the otoscope.		
8. Place one towel around the patient's neck.		
9. Place the other towel around the patient's shoulder, chest, and arm.		
10. Have the patient hold the basin under the affected ear.		
11. Moisten the cotton-tipped applicator with irrigating solution.		
12. Clean the outer ear with the cotton-tipped applicator.		
13. Use your dominant hand to fill the syringe with irrigating solution.		
14. Straighten the ear canal using your nondominant hand.		
NOTE: For an adult, gently grasp the outer ear with the thumb and index finger, and pull upward and backward toward the back of the head. For a child, gently grasp the earlobe and pull downward and backward.		
15. Place the tip of the syringe in the ear canal.		
16. Gently instill the solution.		

	Yes	No
17. Refill syringe and continue the procedure until the debris is removed.	_____	_____
18. Observe the patient for signs of distress while performing the procedure.	_____	_____
19. Clean excess solution from the outer ear with the gauze pads.	_____	_____
20. Recheck the auditory canal with the otoscope.	_____	_____
21. Have the patient hold a gauze pad over the ear after the procedure to collect any residue water or debris.	_____	_____
22. Clean up:		
a. Put all reusable equipment in proper place for re-sterilization.	_____	_____
b. Discard disposable equipment according to universal precautions.	_____	_____
c. Wash your hands.		
23. Document procedure according to agency requirements.	_____	_____

Evaluation

	Yes	No
1. Recheck patient in 30 minutes for comfort.	_____	_____

(End of Job Sheet)

SKILL TEST RECORD

EVALUATOR'S COMMENTS

PRODUCT EVALUATION

Evaluator note: Rate the student on the following criteria by circling the appropriate numbers. Each criterion must receive a rating of "3" or higher to demonstrate student mastery. (See Performance Evaluation Key.) A student who is unable to demonstrate mastery should review the material and submit another product for evaluation.

Criteria:

Used universal precautions	4	3	2	1
Used proper equipment correctly	4	3	2	1
Performed steps in a timely manner	4	3	2	1
Practiced safety rules throughout procedure	4	3	2	1
Provided satisfactory responses to to questions asked	4	3	2	1
Put away equipment and cleaned work area	4	3	2	1

EVALUATOR'S COMMENTS

AVERAGE RATING

Evaluator note: To obtain an average rating for the Competency Profile, total the designated points in "Product Evaluation" and divide by the total number of criteria. Circle the rating on the "Performance Evaluation Key" below.

PERFORMANCE EVALUATION KEY

4 **Skilled** – Can perform job with no additional training

3 **Moderately Skilled** – Has performed job during training program; limited additional training may be required

2 **Limited Skill** – Has performed job during training program; additional training is required to develop skill

1 **Unskilled** – Is familiar with process, but is unable to perform job

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH EAR DISORDERS XIV

Name ______________________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the ear to their correct definitions. Write the correct letter in the blank.

_____ 1. Ringing in the ear

_____ 2. Sensation of spinning

_____ 3. Coiled, cone-shaped organ in the inner ear

_____ 4. The resonant wall of the tympanic cavity in the middle ear

_____ 5. Mass of cells in the middle ear responsible for adjusting to pressure changes

_____ 6. Three small movable bones called the malleus, incus, and stapes

_____ 7. The external structure of the ear that consists of skin-covered cartilage extending to the lobe

_____ 8. Waxy secretion from the ear canal

_____ 9. An exit for sound vibrations from the inner ear

_____ 10. Rigid capsule in the inner ear consisting of three semicircular canals, vestibule, and cochlea

_____ 11. Earache

_____ 12. The footplate of the stapes

a. cerumen

b. circular windows

c. cochlea

d. eustachian tube

e. labyrinth

f. luteum

g. mastoid

h. nevoid

i. ossicles

j. otalgia

k. oval window

l. pinna

m. round window

n. tinnitus

o. tympanic membrane

p. vertigo

May be photocopied for student use

OBJECTIVE 2

Choose the correct word or phrase to complete statements about diseases and disorders of the external ear. Write the correct letter in the blank.

_____ 1. Cerumen and lipids are often washed out of the ear during swimming, leading to

a. external otitis
b. otitis media
c. mastoiditis
d. obstructions

_____ 2. Foreign objects or cerumen in the ear canal often cause

a. external otitis
b. otitis media
c. mastoiditis
d. obstructions

_____ 3. Health care management for patients with external otitis includes

a. apply cold to affected ear
b. bed rest
c. irrigation of ear canal
d. use oil to smother and remove insects

_____ 4. Health care management for patients with obstructions of the ear canal includes

a. apply heat to affected ear
b. gently irrigate ear to remove object
c. tympanoplasty
d. use water or saline solution to wash out obstruction

_____ 5. Signs and symptoms of external otitis include

a. feeling of fullness in ear
b. high fever
c. nausea and vomiting
d. tinnitus

May be photocopied for student use.

______ 6. Signs and symptoms of obstruction of the ear canal include

a. edema of ear canal
b. headache
c. pulling on ear (in children)
d. purulent discharge

______ 7. The teaching plan for patients with external otitis should include

a. background music may help patients deal with tinnitus
b. observe for dizziness in ambulatory patients
c. teach patient to clean ear canal regularly
d. caution patient against inserting objects into ear

______ 8. The teaching plan for patients with obstructions of the ear canal should include

a. advise patients to clean ear canals regularly with cotton-tipped swabs
b. discuss "childproofing" the home to put objects that could be placed in ears out of reach
c. instruct patient to avoid reading during periods of tinnitus
d. teach patient how and when to use topical antibiotics

OBJECTIVE 3

Choose the correct word or phrase to complete statements about diseases and disorders of the middle ear. Write the correct letter in the blank.

______ 1. Repeated perforations of the tympanic membrane can cause

a. chronic mastoiditis
b. inflammation of the external ear canal
c. scarring of the eardrum
d. trauma to the middle ear

______ 2. Perforation of the tympanic membrane may be caused by

a. blow to ear
b. excessive fluid in middle ear
c. malignancy
d. otosclerosis

May be photocopied for student use

_____ 3. Health care management for patients with a perforation of the tympanic membrane includes

a. mastoidoplasty
b. stapedectomy
c. stapling
d. tympanoplasty

_____ 4. Signs and symptoms of a perforated tympanic membrane include

a. attacks of vertigo
b. hemorrhage from ear
c. loss of hearing
d. muffling of sounds in affected ear

_____ 5. Otosclerosis is defined as

a. acute or chronic disturbance in balance
b. chronic inflammation of the ossicles
c. gradual formation of new, spongy bone tissue
d. scarring and hardening of the eardrum

_____ 6. Surgeries for otosclerosis include

a. myringotomy
b. mastoidectomy
c. stapedectomy
d. tympanoplasty

_____ 7. Signs and symptoms of otosclerosis include

a. attacks of vertigo
b. discharge from affected ear
c. nausea and vomiting
d. progressive hearing loss

OBJECTIVE 4 **Choose the correct word or phrase to complete statements about diseases and disorders of the inner ear.** Write the correct letter in the blank.

_____ 1. Labyrinthitis is defined as

a. acute or chronic inflammation of the labyrinth
b. disturbance in balance from continual motion
c. excessive accumulation of endolymph fluid in the structures of the inner ear
d. hardening of the structures of the inner ear

May be photocopied for student use

____ 2. Ménière's disease is defined as

a. acute or chronic inflammation of the labyrinth
b. disturbance in balance from continual motion
c. excessive accumulation of endolymph fluid in the structures of the inner ear
d. hardening of the structures of the inner ear

____ 3. Labyrinthitis may be caused by

a. chronic otitis media
b. excessive fluid intake
c. overuse of histamines
d. use of tobacco or alcohol

____ 4. Health care management for patients with labyrinthitis includes

a. bed rest
b. irrigation of affected ear
c. pain relief
d. warm compresses

____ 5. Health care management for patients with Ménière's disease includes

a. antibiotics
b. myringotomy
c. restrict fluid intake
d. tympanostomy ventilating tube

____ 6. Signs and symptoms of labyrinthitis include

a. feeling of "fullness" in ear
b. high fever
c. purulent drainage
d. vertigo

____ 7. Signs and symptoms of Ménière's disease include

a. blood-tinged drainage
b. pulling on ear (in children)
c. sudden attacks of vertigo
d. sudden, severe pain

May be photocopied for student use.

____ 8. When caring for a patient with labyrinthitis or Ménière's disease, you should

a. apply warm compresses
b. irrigate affected ear
c. monitor ambulatory patient for dizziness or vertigo
d. protect surrounding skin from drainage

____ 9. The teaching plan for patients with labyrinthitis or Ménière's disease, should include

a. encourage patient to clean ear canals regularly
b. instruct patient to avoid reading during periods of vertigo or tinnitus
c. stress the need to adequately treat otitis media
d. teach patient how and when to apply topical medications

OBJECTIVE 5 **Choose the correct word or phrase to complete statements about pre- and postoperative teaching instructions for patients preparing to undergo surgical procedures for diseases and disorders of the ear.** Write the correct letter in the blank.

____ 1. Judy wants to know if she will be comfortable after her surgery. The BEST procedure *at this time* is to ___.

a. reinforce that vital signs will be taken often before and after surgery, and complications will be noted and reported
b. reassure her that you will return to the room frequently to offer assistance and reassurance
c. reinforce that analgesics, sedatives, and oral medications will be administered as ordered
d. teach her to maintain the correct position as indicated for her surgery and condition

____ 2. Trudy wants to know how you will monitor her care before and after surgery. The BEST procedure *at this time* is to ___.

a. teach her to maintain the correct position as indicated for her surgery and condition
b. reinforce that vital signs will be taken often before and after surgery, and complications will be noted and reported
c. reassure her that you will observe for and report any facial paralysis
d. instruct her to breath slowly and deeply through the mouth during attacks of nausea to avoid vomiting

May be photocopied for student use

____ 3. Anna knows that she will not be able to hear well after her surgery; she wants to know how you will communicate with her. The BEST procedure *at this time* is to ___.

a. reinforce the physician's explanation of the procedure with an explanation and drawing

b. explain and obtain a completed informed consent prior to the procedure
c. reassure her that nursing personnel will be nearby to provide assistance when needed
d. reassure her that you will speak slowly and distinctly in a normal tone of voice

____ 4. Lowell asks how you will know if he has any complications. The BEST procedure *at this time* is to ___.

a. reassure him that you will observe for and report any signs of facial paralysis
b. reinforce that analgesics, sedatives, and oral medications will be administered as ordered
c. explain procedures simply and carefully
d. reassure him that nursing personnel will be nearby to provide assistance when needed

____ 5. Alan does not understand the complications and risks involved with his surgery. The BEST procedure *at this time* is to ___.

a. teach him to maintain the correct position as indicated for his surgery and condition
b. explain and obtain a completed informed consent prior to the procedure
c. reassure him that you will speak face to face in a normal tone of voice
d. reassure him that the operative site will be observed for drainage or bleeding

May be photocopied for student use

OBJECTIVE 6 **Choose the correct word or phrase to complete statements about pediatric diseases and disorders of the ear.** Write the correct letter in the blank.

_____ 1. Acute otitis media often follows

a. external otitis
b. high fever
c. removal of foreign object
d. upper respiratory infection

_____ 2. Causes of otitis media include

a. allergies
b. drainage from external otitis
c. fungal infection
d. trauma

_____ 3. Chronic otitis media is caused by

a. allergies
b. drainage from external otitis
c. perforation of the eardrum
d. virulent strains of organisms

_____ 4. Health care management for patients with acute otitis media includes

a. cool compresses
b. irrigate affected ear with mineral oil
c. protect skin surrounding ear from drainage
d. stapedectomy

_____ 5. Health care management for patients with chronic otitis media includes

a. keep ears dry
b. provide low-sodium diet
c. restrict fluid intake
d. tympanostomy ventilating tube

_____ 6. Signs and symptoms of acute otitis media include

a. itching of ear canal
b. purulent drainage
c. redness and crusting
d. rubbing or pulling ear

May be photocopied for student use

______ 7. Signs and symptoms of chronic otitis media include

a. fever and chills
b. foul drainage
c. tinnitus
d. sudden, severe pain

______ 8. When promoting healing for patients with acute or chronic otitis media, you should

a. apply cold compresses to affected ear
b. provide low-sodium diet
c. keep infants sitting upright during feedings
d. use a wick to keep topical medication in ear canal

NOTE: Objectives 7-9 are evaluated on Job Sheets/Assignment Sheets in this unit. If you have not completed these components, see your instructor.

May be photocopied for student use

WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH EAR DISORDERS

XIV

OBJECTIVE 1

1. n
2. p
3. c
4. o
5. g
6. i
7. l
8. a
9. m
10. e
11. j
12. k

OBJECTIVE 2

1. a
2. d
3. c
4. b
5. a
6. c
7. d
8. b

OBJECTIVE 3

1. c
2. a
3. d
4. c
5. c
6. c
7. d

OBJECTIVE 4

1. a
2. c
3. d
4. a
5. c
6. d
7. c
8. c
9. b

OBJECTIVE 5

1. c
2. b
3. d
4. a
5. b

OBJECTIVE 6

1. d
2. a
3. d
4. c
5. d
6. d
7. b
8. c

OBJECTIVE SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE IMMUNE SYSTEM

XV

INTRODUCTION

In the immune system, the body releases specific antibodies designed to defend against invading antigens. The antibodies are the chief protective mechanism used by the immune system. Once an antibody is produced, it is carried by the bloodstream to the antigen. Antibodies coat the surface of antigens and neutralize them. If the angitens are dissolved, the antibodies precipitate them out of solution. If the immune system fails and microbial organisms are allowed to thrive, they will destroy the body's vital tissues or disrupt enzyme systems.

Disorders of the immune system fall into three categories. Type I, hypersensitivity disorders, are characterized by inappropriate immune response to foreign substances. Type II, immunodeficiency diseases, involve suppression or failure of the immune system. Type III, autoimmune disorders, result in self-destruction when the body mounts an attack against its own tissues.

PREREQUISITES

Practical Nursing Series: *Nursing Concepts, Body Structure and Function, Nursing Principles and Skills, Pharmacology, Nutrition, Mental Health, Life Span, Medical-Surgical Nursing I*

UNIT OBJECTIVE

After completing this unit you will be able to recognize diseases and disorders of the immune system and associated nursing processes. In addition, you will demonstrate these competencies by completing Assignment Sheets and the Written Test with a minimum of 85 percent accuracy.

SPECIFIC OBJECTIVES

After completing this unit, you will be able to:

1. Match terms associated with diseases and disorders of the immune system to their correct definitions.
2. Choose the correct word or phrase to complete statements about immunity.
3. Choose the correct word or phrase to complete statements about autoimmune disorders.
4. Choose the correct word or phrase to complete statements about hypersensitivity reactions.
5. Choose the correct word or phrase to complete statements about Human Immunodeficiency Virus (HIV).

6. Plan care for a patient with a disease or disorder of the immune system. (Assignment Sheet 1)

7. Develop a plan of care for a patient with AIDS. (Assignment Sheet 2)

SUGGESTED ACTIVITIES

APPLY THE NURSING PROCESS TO THE CARE OF THE IMMUNE SYSTEM

XV

PREPARATION

- Review unit and plan presentation.
- Determine scope and sequence of objectives that you add. Design and develop support materials, including evaluation techniques, for additional objectives.
- This unit may be divided into several sections to facilitate studying and formative evaluation. The test is written to incorporate these breaks. The sections are:

  Part 1 — Objective 1, basic information that supports the rest of the unit;

  Part 2 — Objectives 2 and 3, the next two groupings, including acquired autoimmune diseases and deficiencies of the autoimmune system; and

  Part 3 — Objectives 4 and 5, the next two groupings, including hypersensitivity reactions and HIV.
- Review teaching suggestions and plan classroom activities.
- Determine how you will schedule time for students to demonstrate competence in the required procedures.
- Order materials to supplement unit.
- Invite a guest speaker to discuss diseases and disorders of the immune system.

  NOTE: Please provide the guest speaker with the specific topic relevant to the unit of instruction ahead of time. You may want to supply the Objective Sheet, Information Sheet, and any other components you want them to cover. Confirm the scheduled appearance 2-3 days prior to the presentation.
- Obtain models and large pictures of the immune system.
- Make a poster of the immune system.
- Make a bulletin board showing the immune system.
- Devise games and/or crossword puzzles to reinforce terms or groupings.

- **HOSA** Integration
    - Assist students to conduct a chapter service project on diseases and disorders of the immune system.
    - Develop objectives for service project and identify a theme.
    - Create a poster according to Extemporaneous Health Display rules. Display in highly visible areas.
    - Plan a community or school health project that involves disseminating pamphlets about proper care of patients with diseases and disorders of the immune system.
    - Develop and/or participate in a community teaching project that involves diseases and disorders of the immune system.
- This unit is designed to comply with the scope of practice for PNs. Discuss alternative administration practices and responsibilities that may vary with the location and type of agency.
- Remind students to respect patient confidentiality when discussing personal experience.

DELIVERY

Objective 1: Match terms associated with the nursing process for diseases and disorders of the immune system to their definitions.

- Discuss terms associated with the immune system.
- Have students play reinforcement games and work crossword puzzles using terms.
- Have a spelling bee using words in this unit.

Objective 2: Choose the correct word or phrase to complete statements about autoimmune disorders.

- Have students share relevant experiences about friends or family members who have problems related to immunity.
- Review the structures of the body associated with autoimmune immunity.
- Have students tell about friends or family members who have had an organ transplant.

Objective 3: Choose the correct word or phrase to complete statements about autoimmune disorders.

- Have students share relevant experiences about friends or family members who have problems related to autoimmune disorders.
- Have students share ideas that might be helpful in evaluating autoimmune disorders.
- Discuss ways in which nurses can improve the care of patients with an autoimmune disorder.
- Discuss other autoimmune disorders not mentioned in this section.
- Have students complete Assignment Sheet 1.

Objective 4: Choose the correct word or phrase to complete statements about hypersensitivity reactions.

- Have students share relevant experiences about friends or family members who have problems related to hypersensitivity reactions.
- Have students share ideas that might be helpful in evaluating hypersensitivity reactions.
- Discuss ways in which nurses can improve the care of patients with a hypersensitivity reaction.
- Discuss other hypersensitivity reactions not mentioned in this section.
- Review the structures of the body associated with hypersensitivity reactions.

Objective 5: Choose the correct word or phrase to complete statements about Human Immunodeficiency Virus (HIV).

- Have students share relevant experiences about friends or family members who have problems related to HIV.
- Have students share ideas that might be helpful in evaluating HIV.
- Discuss ways in which nurses can improve the care of patients with HIV.
- Have students discuss their feelings associated with caring for patients with HIV.

- Review the structures of the body associated with HIV+.
- Have students complete Assignment Sheet 2.

APPLICATION

Objective 6: Plan care for a patient with a disease or disorder of the immune system. (Assignment Sheet 1)

- Have students suggest someone they would like to invite who would speak on diseases and disorders of the immune system.
- Have students present a one-minute speech on the care of a patient with a disease or disorder of the immune system.
- Use Assignment Sheet 1 to give the students an opportunity to practice ideas that will help when they care for a patient with diseases and disorders of the immune system.
- Provide a care plan form for students' use.

Objective 7: Develop a plan of care for a patient with AIDS. (Assignment Sheet 2)

- Use Assignment Sheet 2 to give the students an opportunity to practice ideas that will help when they care for a patient with AIDS.
- Have students present a one-minute speech on care of a patient with AIDS.
- Have students suggest someone they would like to invite who would speak on AIDS.
- Provide a care plan form for students' use.

EVALUATION

Pretest

- Give Written Test as pretest.
- Determine individual study requirements from pretest results.
- Counsel students individually on pretest results and study requirements.
- Modify materials in unit or create supplementary materials for individual students as required.

Written Test

- Explain to students that they will be asked to demonstrate on the Written Test actions listed in the specific objectives.

  NOTE: The Written Test may be given in sections if desired.

- Give the Written Test.

- Complete appropriate sections of Competency Profiles.

- Reteach and retest if necessary.

- Review individual and group performance in order to evaluate teaching methods. Adjust scope, sequence, or instructional approaches for additional lessons as required.

SUGGESTED RESOURCES

Audiovisual Materials

Contact the following organizations for catalogs and materials:

- Concept Media, P.O. Box 19542, Irvine, CA 92713-9542, 800-233-7078.

- Health Edco, P.O. Box 21207, Waco, TX 76702-1207, 800-433-2677.

- Medcom-Trainex, 12601 Industry Street, Garden Grove, CA 92641, 800-877-1443.

- Oklahoma Department of Health, 1000 N.E. 10th Street, P.O. Box 53551, Oklahoma City, OK 73152, 405-271-5724.

Publications

- *University of California Berkeley Wellness Letter*, 48 Shattuck Square, Suite 43, Berkeley, CA. 94704-1140.

UNIT REFERENCES

- Betz, Cecily Lynn, and Elizabeth C. Poster. *Pediatric Nursing Reference* (2nd ed.). St. Louis: The C.V. Mosby Co., 1992.

- Brunner, Lillian Sholtis, and Doris Smith Suddarth. *The Lippincott Manual of Nursing Practice* (4th ed.). Philadelphia: J.B. Lippincott Co., 1986.

- Christensen, Barbara Lauritsen, and Elaine Oden Kockrow. *Foundations of Nursing*. St. Louis: Mosby-Year Book, Inc., 1991.

- Long, Barbara C., and Wilma J. Phipps. *Medical-Surgical Nursing: A Nursing Process Approach* (2nd ed.). St. Louis: The C.V. Mosby Company, 1989.
- Phipps, Wilma J., Barbara C. Long, and Nancy Fugate Woods. *Medical-Surgical Nursing: Concepts and Clinical Practice* (3rd ed.). St. Louis: The C.V. Mosby Company, 1987.
- Thompson, Eleanor Dumont. *Introduction to Maternity and Pediatric Nursing*. Philadelphia: W.B. Saunders Company, 1990.
- Tortora, Gerard J. *Principles of Human Anatomy* (4th ed.). New York: Harper and Row, 1986.
- Yannes-Eyles, Mary. *Comprehensive Review of Practical Nursing* (10th ed.). St. Louis: The C.V. Mosby Company, 1990.

INFORMATION SHEET

APPLY THE NURSING PROCESS TO THE CARE OF THE IMMUNE SYSTEM

XV

OBJECTIVE 1

Match terms associated with diseases and disorders of the immune system to their correct definitions.

- **antibody** — Neutralizing agent formed in response to antigens
- **antigen** — Substance that stimulates the formation of antibodies
- **desensitization** — Administering allergens in low doses to lessen sensitivity
- **hematologic** — Pertaining to the blood and its components
- **hepatotoxic** — Having a poisonous effect on the liver and biliary tract
- **histamine** — A chemical released from injured cells that triggers the body's defenses
- **histocompatibility** — A condition in which cells are able to live without immune interferences
- **immunology** — The study of disease immunity
- **immune system** — A body system that protects against disease
- **nephrotoxic** — Having a poisonous effect on the renal system
- **teratogenic** — Causing abnormal fetal development

OBJECTIVE 2

Choose the correct word or phrase to complete statements about immunity.

- **Actively or naturally acquired immunity** — Patients are immune to a disease because of previous infections. Viruses or bacteria invade the host and act as antigens, which makes the patient resistant to infections from the same pathogen. The body develops antibodies against the antigen. For example, when a patient has chickenpox, the body develops antibodies that resist repeated attacks of this disease.

- **Passively acquired immunity** — Patients are immune to a disease because an organism is introduced that produces a short-lived but effective resistance to a disease. For example, when a patient receives a tetanus shot, a weakened toxoid is injected. This produces an antitoxin, thus giving the patient immunity to tetanus bacteria.

- **Artificially acquired immunity** — Patients are immune to a disease because weakened viruses or bacteria are injected into the body and act as antigens. The body will produce antibodies against the invading antigens, thus producing an immunity to a disease without harming the patient. The Salk vaccine, which immunizes against poliomyelitis, is an example of artificially acquired immunity.

- **Immunosuppression** — A type of chemotherapy for patients with allergic disorders. When patients have allergic reactions, their bodies release too much histamine, which triggers tissue injury. Allergy shots suppress the body's response to the particular allergen that ultimately causes these abnormal responses. Before the shots can be given, the physician does a series of skin tests to identify the irritant.

OBJECTIVE 3

Choose the correct word or phrase to complete statements about autoimmune disorders.

Description and etiology

Systemic lupus erythematosus (SLE) — A chronic, incurable inflammatory disease involving most of the body's major organs. Women are affected more often than men, especially women of childbearing age. SLE is characterized by painful exacerbations and remissions. Insidious exacerbations are triggered by physical and emotional stress and sunlight. Lesions affecting the central nervous system, renal system, or other body systems may be fatal.

Causes

- Autoimmune disorder (genetic, hormonal, and/or viral factors may also be involved)

Health care management

- Symptomatic relief
- Prevent exposure to sun
- Prevent infection
- Balance exercise and rest
- Patients with renal involvement may need kidney dialysis or transplant
- Medications: corticosteroids, antineoplastic agents, nonsteroidal anti-inflammatory agents, analgesics, diuretics, antimalarial agents, immunosuppressants

ASSESSMENT

Systemic lupus erythematosus

Signs and symptoms

- Red, scaly "butterfly rash" on cheeks and bridge of nose
- Photosensitivity
- Alopecia
- Arthritis
- Low-grade fever
- Malaise
- Pleuritic pain
- Hematuria
- Seizures

Description and etiology

Progressive systemic sclerosis (PSS) — Sometimes called scleroderma, this disease is characterized by chronic degenerative changes of the skin and connective tissue throughout the body with periods of exacerbation and remission. PSS affects women more often than men. Involvement begins with a hardening, thickening, and inflammation of the skin and connective tissue, causing pitting edema. Eventually, the skin becomes shiny, tight, smooth, and dry due to non functioning sweat glands. The mouth is rigid and the face is mask-like. Initial involvement may remain localized in the hands and face, but slowly the disease spreads to the entire body. Finally, the tissue degenerates and ceases to function. Death is usually caused by renal failure.

NOTE: *Circumscribed scleroderma* affects localized areas of skin, with no systemic involvement.

Causes

- Autoimmune disorder

Health care management

- Symptomatic relief
- Avoid exposure to cold
- Provide soft, easy-to-swallow foods
- Use creams or petroleum jelly to lubricate skin
- Balance exercise and rest
- Medications: corticosteroids, vasodilators

ASSESSMENT

Signs and symptoms

Progressive systemic sclerosis

- Pitting edema of hands, feet, and face
- Edematous skin becomes thickened and tight
- Skin appears tense and free of wrinkles or lines
- Pruritus
- Hyperpigmentation
- CREST syndrome
  - *C*alcinosis (deposits of lime salts in tissues)
  - *R*aynaud's phenomenon (episodes of cyanosis, tingling, numbness, and burning of the hands)
  - *E*sophagitis (inflammation of the esophagus)
  - *S*clerodactyly (hardening of the skin of the toes and fingers)
  - *T*elangiectasias (lesions formed by dilated blood vessels)
- Gastrointestinal symptoms (heartburn, dysphagia, reflux)
- Cardiovascular symptoms (congestive heart failure, arrhythmias, angina)
- Pulmonary hypertension

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

SYSTEMIC LUPUS ERYTHEMATOSUS and PROGRESSIVE SYSTEMIC SCLEROSIS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide emotional support • Assist with dialysis as needed • Prevent skin breakdown • Provide nutritious, easy-to-swallow meals • Encourage balance of exercise and rest

• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications • Watch for signs of infection
• Plan for patient's discharge	• Prepare teaching plan – Help patient contact support groups – Stress the need to use sunscreens and appropriate clothing to prevent overexposure to sun – Stress the need to treat any infections immediately – Discuss symptoms that should be reported to physician – Discuss devices to aid with activities of daily living – Discuss stress relief – Help patient contact support groups

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NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

OBJECTIVE 4

Choose the correct word or phrase to complete statements about hypersensitivity reactions.

Description and etiology

Anaphylaxis — Systemic hypersensitive reaction to an allergen. Anaphylactic shock is a life-threatening condition caused by systemic anaphylaxis. A sudden release of large amounts of histamine causes multi-system reactions. Immediate emergency measures are necessary to prevent death or permanent damage to body tissue.

Causes

- Reaction to allergen
  - Drug
  - Venom or insect bite
  - Food
  - Contrast medium (such as iodine)
  - Serum or blood transfusion

Health care management

- Eliminate exposure to allergen, if possible

- Maintain airway (intubation may be required)
- CPR may be required
- Medications: epinephrine, antihistamines, vasopressors, corticosteroids, bronchodilators

ASSESSMENT

Anaphylaxis

Signs and symptoms

- Anxiety
- Urticaria
- Pruritus
- Sneezing
- Dyspnea
- Wheezing
- Vomiting
- Edema of face and hands
- Rapid, weak pulse
- Diaphoresis
- Syncope
- Shock

Description and etiology

Allergic reaction — An unusual or unexpected response to any substance that stimulates the immune system. Atopic disorders such as rhinitis, asthma, or dermatitis are allergic responses. The effects can also be gastrointestinal, hematologic, hepatotoxic, nephrotoxic, or teratogenic.

Causes

- Response to factors such as
  - Foods
  - Pollen or spores
  - Animal dander
  - Soaps and detergents
  - Perfume and cosmetics
  - Clothing fibers

Health care management

- Eliminate exposure to allergen
- Wet dressings for dermatitis
- Desensitization treatment
- Medications: antihistamines, corticosteroids, bronchodilators, epinephrine

ASSESSMENT

Signs and symptoms

Allergic reaction

- Red, lacrimating eyes
- Rhinorrhea
- Sneezing
- Urticaria
- Wheezing
- Dyspnea
- Pruritus
- Scaly lesions
- Vesicles

Description and etiology

Serum sickness — An immunologic reaction to therapeutic medication (such as penicillin) or serum (such as inoculations against flu, pneumonia, diphtheria, and tetanus). The inflammatory response begins about a week after the initial dose.

Causes

- Reaction to medication

  NOTE: Because 50 to 75% of patients report a febrile condition before onset, serum sickness may be related to an autoimmune response.

Health care management

- Symptomatic treatment

ASSESSMENT

Signs and symptoms

- Skin rash
- Urticaria

- Purpura
- Joint tenderness
- Nausea and vomiting
- Diarrhea

ANALYSIS Report findings to RN who will assimilate information for analysis and nursing care.

ANAPHYLAXIS, ALLERGIC REACTIONS, and SERUM SICKNESS

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	• Check for use of medications that may cause reaction, such as penicillin
• Collect equipment	
• Promote healing	• Call for emergency help if necessary • Establish and maintain airway • Perform CPR if necessary • Administer medications • Eliminate exposure to allergen, if possible • Assist with allergy testing • Assist with desensitization treatment
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications
• Plan for patient's discharge	• Prepare teaching plan – Emphasize the need to avoid allergens – Patients with known hypersensitivities should carry an anaphylaxis kit at all times – Patient should wear medical alert bracelet – Teach patient to use inhaled medications

NOTE: This is not a care plan, but a nursing process guide. The assessment criteria are generalized and may not apply specifically to each disorder.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.

- Contribute to plan of care update.

OBJECTIVE 5

Choose the correct word or phrase to complete statements about Human Immunodeficiency Virus (HIV).

Description and etiology

Acquired Immune Deficiency Syndrome (AIDS) — A progressive, incurable disorder that breaks down part of the body's immune system and leaves the patient vulnerable to a variety of life-threatening illnesses.

Human Immunodeficiency Virus (HIV), the virus that causes AIDS, is present in body fluids and is usually transmitted through sexual contact or from sharing infected needles. Other methods of transmission include transplacental (mother to fetus) and blood transfusion (routine screening of donated blood since 1985 has greatly reduced the incidence of disease transmissions.) HIV attacks and destroys the T4-lymphocytes, leaving the body defenseless against infections. It is these diseases, not the virus itself, that cause death. A person may be infected with HIV for many years before symptoms develop, but they can transmit it to others even if asymptomatic.

AIDS-Related Complex (ARC) is a group of symptoms that often appear before full-blown AIDS develops. Conditions that make up ARC include lymphadenopathy, fatigue, weight loss, night sweats, fever, and diarrhea.

Full-blown AIDS may develop months or years after the initial infection. A patient who tests positive for HIV is diagnosed with AIDS after meeting specific criteria, such as developing Kaposi's sarcoma or *pneumocystis carinii* pneumonia.

Although there is no cure for AIDS, it can easily be prevented. Patient education is important in helping prevent the spread of AIDS.

Risk factors

- Homosexual or bisexual males
- Intravenous drug users
- Multiple sexual partners
- Unprotected sex
- Exposure to blood or body fluids

NOTE: Although certain populations are at a higher risk of exposure to HIV, it should be understood that all persons are at risk of contracting the virus and developing AIDS.

Health care management

- Supportive care
- Emotional support
- Symptomatic relief
- Provide adequate nutrition
- Prevent spread of disease to others
- Infection control
- Medications: zidovudine

ASSESSMENT

Acquired Immune Deficiency Syndrome

Signs and symptoms

- Sudden, severe weight loss
- Diarrhea
- Swollen lymph nodes
- Fever
- Night sweats
- Opportunistic infections

ANALYSIS

Report findings to RN who will assimilate information for analysis and nursing care.

ACQUIRED IMMUNE DEFICIENCY SYNDROME

PLAN	IMPLEMENTATION
• Check doctor's orders	
• Plan for documentation	• Document all aspects of patient care
• Plan for safety	• Use universal precautions
• Check medication record	
• Collect equipment	
• Promote healing	• Administer medications • Provide emotional support • Provide frequent small, nutritious meals • Prevent infection
• Continually monitor patient's condition	• Monitor vital signs, I/O • Observe for complications

• Plan for patient's discharge	• Prepare teaching plan – Patients should understand the nature of the disease – Discuss methods to avoid spreading disease – Discuss methods of infection control – Emphasize the need for adequate nutrition – Help patient contact support groups

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NOTE: This is not a care plan, but a nursing process guide.

EVALUATION

- Re-assess patient, report any changes.
- Assess vital signs again, report any changes.
- Contribute to plan of care update.

DIAGNOSTIC PROCEDURES

Laboratory studies

- **Antinuclear antibody (ANA)** – A test for the presence of antinuclear antibody cells in the blood
- **Enzyme-linked immunosorbent assay (ELISA)** – A test for the presence of antibodies to HIV in the blood
- **Lupus erythematosus (LE) cell test** – A test for the presence of lupus erythematosus cells in the blood
- **Radioallergosorbent test (RAST)** – A measurement of the level of immunoglobulin for a specific allergen
- **Western blot test** – A test for the presence of antibodies to HIV in the blood; this test is more accurate than the ELISA test and is usually given to confirm a positive ELISA result

Skin testing – Placing a small amount of a suspected allergen in contact with the patient's skin to determine sensitivity

ASSIGNMENT SHEET 1

APPLY THE NURSING PROCESS TO THE CARE OF THE IMMUNE SYSTEM

XV

Name ______________________________ Score ________

OBJECTIVE 6

Plan care for a patient with a disease or disorder of the immune system.

INTRODUCTION

Systemic lupus erythematosus (SLE) is an incurable, multi-system disease. Treatment is aimed at relieving symptoms and inducing remission. Patients with SLE need emotional, as well as medical, support.

Catherine Steele is a 33-year-old who was diagnosed with SLE several months ago. Her symptoms had subsided since her diagnosis, but they recently began to exacerbate. Ms. Steele was admitted to the hospital this morning.

DIRECTIONS

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records
- Use content area vocabulary

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

In this assignment you may plan care for a patient in your clinical practice or use the case study above. Care plans are essentially research projects for each of your patients. Use additional medical-surgical resources to research the condition in more depth and to help you decide on nursing care. Use the information in Objective 3 to complete a plan of care for your patient. Your instructor will provide a care plan form.

Nursing interventions include:

- Monitor vital signs
- Record intake and output
- Assess skin condition
- Administer medications
- Provide adequate nutrition and fluids
- Maintain patient's activity level
- Promote patient comfort
- Monitor patient's emotional status
- Give personal care
- Plan for patient's discharge

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT SHEET 2

APPLY THE NURSING PROCESS TO THE CARE OF THE IMMUNE SYSTEM

XV

Name ______________________________ Score ________

OBJECTIVE 7

Develop a plan of care for a patient with AIDS.

INTRODUCTION

Patients who have AIDS may be frightened or angry about their condition. They may also have feelings of shame and hopelessness. Nurses should be cautious when caring for a person with AIDS (PWA), but they must provide the same standard of care they give other patients. Universal precautions are essential to prevent the spread of infection to immunosuppressed patients, as well as to other patients and to the nursing staff. Teaching and supportive care are important responsibilities, as the nurse can implement measures to reduce anxiety and facilitate comfort. Stressing preventive measures, setting a compassionate example for others, and maintaining a positive outlook are additional nursing duties. Medical confidentiality is required by law and is critical in protecting the patient's privacy. The practical nurse can also help teach others about AIDS.

Your patient, who was admitted to the hospital with AIDS, has been experiencing weight loss, night sweats, loss of appetite, and fatigue.

DIRECTIONS

Use a medical-surgical text, the situation above, or a patient in your clinical practice, and the information from Objective 5 to develop a plan of care. Your instructor will provide a care plan form.

Nursing interventions include:

- Monitor vital signs
- Record intake and output
- Administer medications
- Give personal care
- Use aseptic technique
- Provide adequate nutrition and fluids
- Maintain patient's activity level
- Provide patient comfort
- Prevent skin breakdown
- Provide supportive care
- Instruct patient and family on disease prevention and methods of transmission
- Monitor patient's emotional status

Reading Comprehension
- Gain factual information

Research and Reference
- Select useful resources

Functional Reading
- Interpret forms and records
- Use content area vocabulary

Language
- Use standard grammar, spelling, and capitalization
- State ideas clearly

Functional Writing
- Complete forms and records

Life Science

- Investigate health issues

Cognitive Activities

- Collect/record information
- Identify critical elements/issues
- Create a finished product

Job Acquisition/ Development

- Master specific job task/procedure

ASSIGNMENT ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE IMMUNE SYSTEM

XV

ASSIGNMENT SHEET 1

Care plan should meet the following criteria:

- Nursing process followed
  - Assessment
  - Analysis (under direction of RN)
  - Planning
  - Implementation
  - Outcome/evaluation (under direction of RN)
- Nursing actions/interventions include
  - Monitor vital signs
  - Record intake and output
  - Assess skin condition
  - Administer medications
  - Provide adequate nutrition and fluids
  - Maintain patient's activity level
  - Promote patient comfort
  - Monitor patient's emotional status
  - Give personal care
  - Plan for patient's discharge

ASSIGNMENT SHEET 2

Care plan should meet the following criteria:

- Nursing process followed
  - Assessment
  - Analysis (under direction of RN)
  - Planning
  - Implementation
  - Outcome/evaluation (under direction of RN)
- Nursing actions/interventions include
  - Monitor vital signs
  - Record intake and output
  - Administer medications
  - Give personal care
  - Use aseptic technique
  - Provide adequate nutrition and fluids
  - Maintain patient's activity level
  - Provide patient comfort
  - Prevent skin breakdown
  - Provide supportive care

- Instruct patient and family on disease prevention and methods of transmission
- Monitor patient's emotional status

WRITTEN TEST

APPLY THE NURSING PROCESS TO THE CARE OF THE IMMUNE SYSTEM

XV

Name ______________________________ Score ________

OBJECTIVE 1

Match terms associated with diseases and disorders of the immune system to their correct definitions. Write the correct letter in the blank.

_____ 1. A body system that protects against disease

_____ 2. Having a poisonous effect on the renal system

_____ 3. Administering allergens in low doses to lessen sensitivity

_____ 4. Having a poisonous effect on the liver and biliary tract

_____ 5. A condition in which cells are able to live without immune interferences

_____ 6. The study of disease immunity

_____ 7. Causing abnormal fetal development

_____ 8. Neutralizing agent formed in response to antigens

_____ 9. A chemical released from injured cells that triggers the body's defenses

_____ 10. Substance that stimulates the formation of antibodies

_____ 11. Pertaining to the blood and its components

a. antibody
b. antigen
c. chemotherapy
d. desensitization
e. dyskinesia
f. hematologic
g. hepatotoxic
h. histamine
i. histocompatibility
j. immunology
k. immune system
l. marasmus
m. nephrotoxic
n. otalgia
o. purpura
p. teratogenic
q. thelasis
r. urticaria

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OBJECTIVE 2 **Choose the correct word or phrase to complete statements about acquired autoimmune diseases.** Write the correct letter in the blank.

_____ 1. Viruses or bacteria that invade the host and act as antigens, making the patient resistant to infections from the same pathogen, is an example of ___.

a. artificially acquired immunity
b. passively acquired immunity
c. actively acquired immunity
d. immunosuppression

_____ 2. A patient who is immune to a disease because an organism was introduced that produced a short-lived, but effective, resistance has ___.

a. actively acquired immunity
b. passively acquired immunity
c. immunosuppression
d. artificially acquired immunity

_____ 3. If weakened viruses or bacteria are injected into the body and act as antigens, producing immunity without harming the patient, the patient has ___.

a. artificially acquired immunity
b. passively acquired immunity
c. actively acquired immunity
d. immunosuppression

_____ 4. ___ _______ is a type of chemotherapy for patients with allergic disorders.

a. Actively acquired immunity
b. Artificially acquired immunity
c. Immunosuppression
d. Passively acquired immunity

_____ 5. The Salk vaccine, which immunizes against poliomyelitis, is an example of

a. actively acquired immunity
b. artificially acquired immunity
c. immunosuppression
d. passively acquired immunity

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_____ 6. A tetanus shot is an example of

- a. actively acquired immunity
- b. artificially acquired immunity
- c. immunosuppression
- d. passively acquired immunity

_____ 7. A person who has had chickenpox in the past, and has antibodies that will resist further chickenpox infections, has

- a. actively acquired immunity
- b. artificially acquired immunity
- c. immunosuppression
- d. passively acquired immunity

_____ 8. Allergy shots are an example of

- a. actively acquired immunity
- b. artificially acquired immunity
- c. immunosuppression
- d. passively acquired immunity

OBJECTIVE 3

Choose the correct word or phrase to complete statements about deficiencies of the autoimmune system. Write the correct letter in the blank.

_____ 1. Systemic lupus erythematosus (SLE) is defined as a(n)

- a. acute inflammatory skin disorder
- b. disease characterized by chronic, degenerative changes of skin and connective tissue
- c. chronic, incurable, autoimmune skin disorder
- d. chronic, incurable inflammatory disease involving most of the body's major organs

_____ 2. Progressive systemic sclerosis (PSS) is defined as a(n)

- a. acute inflammatory skin disorder
- b. disease characterized by chronic, degenerative changes of skin and connective tissue
- c. chronic, incurable, autoimmune skin disorder
- d. chronic, incurable inflammatory disease involving most of the body's major organs

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______ 3. Health care management for patients with SLE includes

  a. antihistamines and antibiotics
  b. prevent exposure to sun
  c. provide soft, easy-to-swallow foods
  d. vasoconstrictors

______ 4. Health care management for patients with PSS includes

  a. avoid exposure to cold
  b. prevent exposure to sun
  c. prevent infection
  d. provide stress relief

______ 5. Signs and symptoms of SLE include

  a. dysphagia and heartburn
  b. hyperpigmentation
  c. pitting edema
  d. photosensitivity

______ 6. Signs and symptoms of PSS include

  a. alopecia
  b. arthritis
  c. CREST syndrome
  d. low-grade fever

______ 7. When promoting healing for a patient with SLE or PSS, you should

  a. apply warm compresses
  b. prevent skin breakdown
  c. provide frequent small, nutritious meals
  d. remove allergens

______ 8. The teaching plan for patients with SLE or PSS should include

  a. discuss devices to aid with activities of daily living
  b. emphasize the need to avoid allergens
  c. recommend genetic counseling
  d. teach patient to use inhaled medications

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OBJECTIVE 4 **Choose the correct word or phrase to complete statements about hypersensitivity reactions.** Write the correct letter in the blank.

_____ 1. A systemic hypersensitive reaction to an allergen is

- a. allergic reaction
- b. anaphylaxis
- c. atopic response
- d. serum sickness

_____ 2. An unusual or unexpected response to any substance that stimulates the immune system is

- a. allergic reaction
- b. anaphylaxis
- c. atopic response
- d. serum sickness

_____ 3. An immunologic reaction to therapeutic medication or serum is

- a. allergic reaction
- b. anaphylaxis
- c. atopic response
- d. serum sickness

_____ 4. Anaphylaxis may be caused by

- a. animal dander
- b. cosmetics
- c. contrast medium
- d. pollen

_____ 5. Allergic reaction may be caused by response to factors such as

- a. infection
- b. pollen or spores
- c. serum or blood transfusion
- d. fever

_____ 6. Serum sickness may be caused by

- a. blood transfusion
- b. contrast medium
- c. insect bites
- d. tetanus inoculation

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_____ 7. Health care management for patients with anaphylaxis includes

   a. apply warm moist compresses
   b. desensitization treatment
   c. maintain airway
   d. prevent infection

8. Health care management for patients with allergic reaction includes

   a. CPR, if necessary
   b. intubation or tracheostomy
   c. prevent infection
   d. wet dressings for dermatitis

9. Health care management for patients with serum sickness includes

   a. epinephrine
   b. eliminate exposure to allergen
   c. symptomatic treatment
   d. wet dressings for dermatitis

_____ 10. Signs and symptoms of allergic reaction include

   a. edema
   b. diaphoresis
   c. rhinorrhea
   d. syncope

_____ 11. Signs and symptoms of serum sickness include

   a. anxiety
   b. dyspnea
   c. sneezing
   d. urticaria

_____ 12. Signs and symptoms of anaphylaxis include

   a. anxiety
   b. red, lacrimating eyes
   c. scaly lesions
   d. vesicles

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_____ 13. When promoting healing for a patient with anaphylaxis, allergic reaction, or serum sickness, you should

a. apply cool compresses to skin lesions
b. eliminate exposure to allergen, if possible
c. prevent skin breakdown
d. provide several small, high-calorie meals

_____ 14. The teaching plan for patients with anaphylaxis, allergic reaction, or serum sickness should include

a. advise patient to wear sunscreen daily
b. emphasize the need to prevent infection
c. emphasize the need for adequate nutrition
d. patients should wear medical alert bracelet

OBJECTIVE 5

Choose the correct word or phrase to complete statements about Human Immunodeficiency Virus (HIV). Write the correct letter in the blank.

_____ 1. Acquired Immune Deficiency Syndrome (AIDS) is defined as a(n)

a. autoimmune disease that causes vulnerability to infection
b. fatal disease caused by the HIV virus
c. progressive, incurable disorder that breaks down part of the body's immune system
d. virus that destroys T4-lymphocytes, leaving the body defenseless against infections

_____ 2. Risk factors for AIDS include

a. age 45 or younger
b. chronic infection
c. homosexual males and lesbian females
d. people with multiple sex partners

_____ 3. Signs and symptoms of AIDS include

a. generalized rash, especially on palms and soles
b. foul, purulent discharge from penis or vagina
c. night sweats and sudden weight loss
d. pathologic fractures

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_____ 4. When implementing the plan to promote healing for a patient with AIDS, you will provide

a. catheter care
b. frequent small, nutritious meals
c. cold packs for pain relief
d. pre- and postoperative care

_____ 5. The teaching plan for a patient with AIDS should include

a. advise female patients to avoid douching
b. discuss family planning
c. discuss methods to avoid spreading disease
d. teach patient range-of-motion exercises

NOTE: Objectives 6 and 7 are evaluated on Assignment Sheets in this unit. If you have not completed these components, see your instructor.

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WRITTEN TEST ANSWERS

APPLY THE NURSING PROCESS TO THE CARE OF THE IMMUNE SYSTEM

XV

OBJECTIVE 1

1. k
2. m
3. d
4. g
5. i
6. j
7. p
8. a
9. h
10. b
11. f

OBJECTIVE 2

1. c
2. b
3. a
4. c
5. b
6. d
7. a
8. c

OBJECTIVE 3

1. d
2. b
3. b
4. a
5. d
6. c
7. b
8. a

OBJECTIVE 4

1. b
2. a
3. d
4. c
5. b
6. d
7. c
8. d
9. c
10. c
11. d
12. a
13. b
14. d

OBJECTIVE 5

1. c
2. d
3. c
4. b
5. c

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TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 1 – APPLY THE NURSING PROCESS TO THE CARE OF THE INTEGUMENTARY SYSTEM

TOTAL NUMBER OF TEST QUESTIONS 114

TOTAL NUMBER OF BASIC SKILL QUESTIONS 99

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	**1-12**	**S**
2	**1-13**	**S**
3	**1-8, 12**	**S**
3	**9-11, 13**	**X**
4	**1-3, 6-8**	**S**
4	**4, 5, 9, 10**	**X**
5	**1-9**	**S**
5	**10, 11**	**X**
6	**1-6**	**S**
7	**1-12**	**S**
7	**13-17**	**X**
8	**1-12**	**S**
8	**13**	**X**
9	**1-10**	**S**
10	**1-10**	**S**

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CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 2 – APPLY THE NURSING PROCESS TO THE CARE OF THE MUSCULOSKELETAL SYSTEM

TOTAL NUMBER OF TEST QUESTIONS 106

TOTAL NUMBER OF BASIC SKILL QUESTIONS 97

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-4, 6-8	S
1	5, 9	X
2	1-11	S
2	12	X
3	1-3, 5-14	S
3	4	S, M
3	15	X
4	1-11, 13	S
4	12	X
5	1-4, 6-10	S
5	5	X
6	1-18, 20-28	S
6	19	X
7	1-8	S
7	9	X
8	1-9	S
8	10	X

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 3 – APPLY THE NURSING PROCESS TO THE CARE OF THE CENTRAL NERVOUS SYSTEM

TOTAL NUMBER OF TEST QUESTIONS 179

TOTAL NUMBER OF BASIC SKILL QUESTIONS 172

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	Part 1: 1-9, Part 2: 1-10	S
2	1, 6	X
2	2-5	S
3	1-11	S
3	12	X
4	1, 3-15	S
4	2	X
5	1-21	S
6	1-20	S
7	1-12, 14	S
7	13	X
8	1-7	S
9	1-18, 21	S
9	19, 20	X
10	1-13	S
11	1-30	S
12	1	S, W, T

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CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 4 – APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: HEART

TOTAL NUMBER OF TEST QUESTIONS 83

TOTAL NUMBER OF BASIC SKILL QUESTIONS 74

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-8	S
2	1, 4, 8, 12	X
2	2, 3, 5-7, 9-11, 13, 14,	S
3	1-4, 6-8	S
3	5	X
4	1-8	S
4	9	X
5	1-10	S
5	11	X
6	1-9	S
7	1-10	S
8	1-6	S
8	7	X
9	1-6	S
9	7	X

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 5 – APPLY THE NURSING PROCESS TO THE CARE OF THE CIRCULATORY SYSTEM: BLOOD VESSELS

TOTAL NUMBER OF TEST QUESTIONS 71

TOTAL NUMBER OF BASIC SKILL QUESTIONS 67

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	Part 1: 1-6, Part 2: 1-7	S
2	1-4, 6, 7	S
2	5	X
3	1-7	S
3	8, 9	X
4	1-12	S
5	1-8	S
6	1-10	S
6	11	X
7	1-6	S
8	1-5	S

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 6 – APPLY THE NURSING PROCESS TO THE CARE OF THE CARDIOVASCULAR SYSTEM: BLOOD

TOTAL NUMBER OF TEST QUESTIONS 56

TOTAL NUMBER OF BASIC SKILL QUESTIONS 56

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	**1-8**	**S**
2	**1-6**	**S**
3	**1-11**	**S**
4	**1-7**	**S**
5	**1-7**	**S**
6	**1-4**	**S**
7	**1-7**	**S**
8	**1-6**	**S**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 7 – APPLY THE NURSING PROCESS TO THE CARE OF THE UPPER GASTROINTESTINAL SYSTEM

TOTAL NUMBER OF TEST QUESTIONS 66

TOTAL NUMBER OF BASIC SKILL QUESTIONS 64

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-11	S
2	1-4	S
3	1-8	S
3	9	X
4	1-16	S
5	1-10	S
6	1-11	S
7	1-4	S
7	5	X

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 8 – APPLY THE NURSING PROCESS TO THE CARE OF THE LOWER GASTROINTESTINAL SYSTEM

TOTAL NUMBER OF TEST QUESTIONS 75

TOTAL NUMBER OF BASIC SKILL QUESTIONS 68

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	**1-8**	**S**
2	**1-5, 8-12**	**S**
2	**6, 7**	**X**
3	**1-14**	**S**
3	**15, 16**	**X**
4	**1-10**	**S**
4	**11**	**X**
5	**1-14, 16-23**	**S**
5	**15**	**X**
6	**1-4**	**S**
6	**5**	**X**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 9 – APPLY THE NURSING PROCESS TO THE CARE OF THE URINARY SYSTEM

TOTAL NUMBER OF TEST QUESTIONS 80

TOTAL NUMBER OF BASIC SKILL QUESTIONS 73

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	Part 1: 1-10, Part 2: 1-8	S
2	1-7, 9-12, 14-17, 19-25	S
2	8, 13, 18	X
3	1-4, 6-9	S
3	5	X
4	1-3, 5, 6,	S
4	4	X
5	1-7	S
6	1-3, 5, 6	S
6	4	X
7	1-4	S
7	5	X
8	1-4	H

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 10 – APPLY THE NURSING PROCESS TO THE CARE OF THE RESPIRATORY SYSTEM

TOTAL NUMBER OF TEST QUESTIONS 115

TOTAL NUMBER OF BASIC SKILL QUESTIONS 100

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	**Part 1: 1-10, Part 2: 1-7**	**S**
2	**1, 2, 4-14, 16-20, 22, 23**	**S**
2	**3, 15, 21**	**X**
3	**1-7, 9-12, 14-28, 30-33, 35-38, 40-42, 44-47, 49-51, 53-59**	**S**
3	**8, 13, 29, 34, 39, 43, 48, 52, 60**	**X**
4	**1-3, 5-7, 9-11, 13-15**	**S**
4	**4, 8, 12**	**X**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 11 – APPLY THE NURSING PROCESS TO THE CARE OF THE ENDOCRINE SYSTEM

TOTAL NUMBER OF TEST QUESTIONS 78

TOTAL NUMBER OF BASIC SKILL QUESTIONS 67

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	Part 1: 1-10, Part 2: 1-10	S
2	1-8, 11-18	S
2	9, 10, 19	X
3	1-5, 7, 9	S
3	6, 8, 10	X
4	1-3, 5-9	S
4	4, 10	X
5	1-4, 6-11, 13, 14	S
5	5, 12	X
6	1-4	S
6	5	X

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 12 – APPLY THE NURSING PROCESS TO THE CARE OF THE REPRODUCTIVE SYSTEM

TOTAL NUMBER OF TEST QUESTIONS 125

TOTAL NUMBER OF BASIC SKILL QUESTIONS 111

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-9	S
2	1-11	S
2	12	X
3	1, 2	S
3	3	H
3	4	X
4	1-5, 7, 9-14	S
4	6, 8, 15	X
5	1-7, 9-11, 13-16	S
5	12, 8	X
6	1-7, 9-11, 13-16	S
6	8, 12	X
7	1-11	S
7	12	X
8	1, 4	S
8	2	H
8	3	S, H

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 12 – APPLY THE NURSING PROCESS TO THE CARE OF THE REPRODUCTIVE SYSTEM

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
9	**1-18**	**S**
9	**19**	**X**
10	**1-9, 11, 12**	**S**
10	**10, 13**	**X**
11	**1-4**	**S**
11	**5**	**X**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 13 – APPLY THE NURSING PROCESS TO THE CARE OF FTHE PATIENT WITH VISION DISORDERS

TOTAL NUMBER OF TEST QUESTIONS 79

TOTAL NUMBER OF BASIC SKILL QUESTIONS 69

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	Part 1: 1-7, Part 2: 1-7	S
2	1-6, 8-11, 13-17	S
2	7, 12	X
3	1-11, 13-19	S
3	12, 20	X
4	1-15	S
5	1-4	X
6	1-3, 5-8	S
6	4, 9	X

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 14 - APPLY THE NURSING PROCESS TO THE CARE OF THE PATIENT WITH EAR DISORDERS

TOTAL NUMBER OF TEST QUESTIONS 49

TOTAL NUMBER OF BASIC SKILL QUESTIONS 45

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	**1-12**	**S**
2	**1-6**	**S**
2	**7, 8**	**X**
3	**1-7**	**S**
4	**1-8**	**S**
4	**9**	**X**
5	**1-4**	**H**
5	**5**	**X**
6	**1-8**	**S**

CIMC
TEST CODE SHEET

VOCATIONAL PROGRAM (BOOK TITLE) MEDICAL-SURGICAL II

UNIT NUMBER AND TITLE 15 – APPLY THE NURSING PROCESS TO THE CARE OF THE IMMUNE SYSTEM

TOTAL NUMBER OF TEST QUESTIONS 46

TOTAL NUMBER OF BASIC SKILL QUESTIONS 43

OBJECTIVE NUMBER	TEST QUESTION NUMBER(S)	BASIC SKILL CODE(S)
1	1-11	S
2	1-8	S
3	1-7	S
3	8	X
4	1-13	S
4	14	X
5	1-4	S
5	5	X

Medical-Surgical II

Instructional Supplement

READING

Reading Comprehension

- If students have difficulty gaining factual information:
    - Remind students that they probably read for many reasons. One of these reasons is to learn new information. The reason you have for reading helps determine the way you read.
    - Have students discuss the different techniques they use when reading. Lead the discussion so that students realize that, when they read for fun, they may read quickly; they may skim some parts and read others more carefully. Reading for facts requires more care.
    - Suggest that one technique found to be successful includes the following steps:
        - Identify in advance what it is you want to learn. Be certain that before starting to read, you have a clear understanding of what you want to accomplish. It sometimes helps to list the questions to be answered.
        - If the material to be read includes a table of contents, study it to get an understanding of how the material is organized.
        - Scan through the material noting headings, highlighted information, illustrations, etc.
        - Read the material carefully. Take notes or highlight as you read, listing or marking the information you want to learn. Note key words and ideas.
        - Study your notes/highlighted material. Ask yourself if you found all you wanted to learn. If not, read the material again or locate another source for the information.
    - Tell students that they should find a personal technique for reading to learn factual information.

Research and Reference

- If students have difficulty selecting useful resources:
    - Review the different types of resources available to students. Have volunteers tell what kind of information can be found in each resource type. Have them discuss the types of projects on which each resource can assist.

- ☐ Help students learn how to locate each resource in libraries, resource centers, or media centers.

Functional Reading

- If students have difficulty interpreting forms and records:
  - ☐ Remind students that interpreting forms and records is a skill they will be practicing throughout life. We must read and interpret forms or records almost daily. Have students volunteer to identify the types of forms or records they will encounter or have already encountered.
  - ☐ Compare the interpretation of forms and records to reading a page. Each part of the form or record has a specific purpose. Suggest that, when they have a form or record to interpret, students should carefully study the headings and the sections within the form or record, as well as the key or any other information that will help in understanding the meaning of the form or record.
- If students have difficulty using content area vocabulary:
  - ☐ Remind students that nearly every occupation or group uses words that have specific, specialized meanings to others in the same occupation or group. Have them name and define some content area, technical, or "slang" words with which they are familiar.
  - ☐ Explain that using content area or technical words makes it easier for people within groups or occupations to communicate ideas accurately. Remind students that often the same word may have a generic meaning to the majority of people, but a very specific meaning within an industry.
  - ☐ Review key terms and concepts, so that students hear, see, write, and say them.
  - ☐ Have students suggest ways to learn the meanings of the vocabulary specific to what they are studying. Provide opportunities for students to practice using the terminology they will need.

WRITING

Language

- If students have difficulty using standard grammar, spelling, and capitalization:
    - Discuss the importance of using standard grammar and correct spelling, punctuation, and capitalization. Include the fact that it is more difficult to read and understand incorrectly-written materials, and that readers will take correctly-written materials more seriously.
    - List common errors in grammar, spelling, punctuation, and capitalization in materials written by your students. Review this list with the class or with individuals.
    - Help students to develop a checklist to use as they write, edit, and proofread. Each student can personalize his or her own checklist by adding the items that present the most problems to him or her. If spelling is a problem, suggest that the student keep a personal dictionary of frequently used or misspelled words.
    - Have students work with partners or in groups and review each others' writing. Allow time for students to discuss the comments with their partners or groups.
    - Suggest that as students write or proofread their own writing, they circle or mark places where they are unsure of the correct grammar, punctuation, capitalization, or spelling. Provide materials (English grammar/mechanics books or style guides) or class time for students to review, revise, or correct their writing.
- If students have difficulty stating ideas clearly:
    - Remind students to determine in advance the ideas they want to convey and the audience they want to reach. Audience analysis is very important in presenting ideas clearly and appropriately.
    - State that audience analysis begins early, such as when students are doing their research. They must describe their intended audience and decide how to best present their ideas to that audience. Options for communicating with the audience include written reports, charts, graphs, diagrams, etc. Explain how the audience influences the way in which the information is presented (such as very simple text with pictures, for children; a great deal of background information, for people who know nothing about or very little about the subject; or, little background but more complex information, for experts).

- ☐ Have students work with a partner or in a small group. Provide time for them to share ideas with each other and make suggestions for making ideas clearer.

- ☐ Remind students that careful preplanning and the use of correct grammar, spelling, punctuation, and capitalization are especially important if their ideas are to be clearly understood by the intended audience.

Research

- If students have difficulty taking notes:

  - ☐ Remind students of the importance of note-taking to the preparation of the final product. Explain that, because notes are for the student's own use, students should develop their own note-taking style. It will also be easier to prepare the final product if students take notes in their own words (instead of copying directly from the original source).

  - ☐ Have students volunteer to discuss some of their own note-taking techniques. Suggest that others may wish to experiment with some of these techniques.

- If students have difficulty using note cards:

  - ☐ Distinguish between note cards and reference cards: *Note cards* allow the writer to record all of the information needed to produce a report or essay without making multiple trips to a library or other resource center. *Reference cards* record bibliographic information about the sources used for note cards. (One reference card may be created for a number of note cards.) Describe a scenario involving the use of note cards and reference cards to produce a report or essay.

  - ☐ Identify types of information that can be recorded on *note cards*: direct quotations, paraphrases, summaries, facts and figures, statistics, and others. Define each type, if needed.

  - ☐ Identify types of information to be recorded on *reference cards*: author (first name, last name, middle initial), editor (if there is one), source title and edition, place of publication, name of publisher, date of publication, and other information (such as volume number, etc.).

  - ☐ Provide some basic guidelines for using note cards and reference cards:

    - ▸ Use small, lined index cards (such as 4"X6") in order to limit the amount of information recorded on each card. (Larger cards may not force you to limit your information.)

    - ▸ Determine the types of information required by the audience; conduct audience analysis before beginning research.

- On each note card, note only one item of information (one quote, one fact, one paraphrase, one summary, etc.).
- On each reference card, write the author, source name and page number. (You may have multiple note cards relating to each reference card.) This information is very important; you must credit the author for any direct quotations, paraphrases, or data used. Follow any required standard for creating bibliographies, such as the Gregg Reference Manual, the APA manual, and others.
- Use a numbering system to organize note cards and to relate them to reference cards.

MATHEMATICS

Operation and Calculation

- If students have difficulty calculating with whole numbers:
    - Review basic skills in addition, subtraction, multiplication, and division.
    - Review mathematical terminology. (For example, "compare" indicates that you must subtract.)
    - Suggest the use of a calculator to check answers.

Data Analysis and Display

- If students have difficulty interpreting charts and tables:
    - Review the structure of the specific chart or table.
    - Discuss the information contained in the chart.
    - Demonstrate the proper use of the chart.

Functional Math

- If students have difficulty making measurements:
    - Remind students that a key to making accurate measurements is to understand the techniques used for the type of measurement being made.

    - Suggest that students ask questions such as: How should the measurement be recorded (nearest inch)? What should be used to make the measurement? Are there special instructions that should be followed? Understanding what is expected and what must be learned makes the measuring task easier.

    - Review what is to be measured, the tools to be used, and any special instructions to be followed. Allow students time to practice using and reading the tool or measuring device.

    - Review the units of measure in the English and metric systems, if appropriate.

    - Demonstrate the correct procedure for making the required measurement(s).

- If students have difficulty solving practical problems:

    - Review the problem-solving procedure associated with the problems they have been assigned.

    - Walk them through a practice problem.

    - Explain the importance of solving problems correctly and the consequences for solving the problems incorrectly.

    - Explain how the students' assignments fit into "the big picture" of the assignment and/or of the objectives of the unit.

SCIENCE

General Science

- If students have difficulty using scientific instruments:

    - Discuss, demonstrate, and review the procedures. Provide more opportunities for students to practice using scientific instruments.

Life Science

- If students have difficulty investigating/applying the principles of human development:

    - Remind students that it is important in any area of work or study to have consistent ideas or principles. Ask them to name things they expect a two-year-old to do that a newborn cannot do. Ask why the two-year-old can do more things. Repeat these questions with other age ranges.

- If students have difficulty investigating/applying the principles of anatomy/physiology (terminology):

- Remind students that it is important in any area of work or study to have consistent ideas or principles. Apply this concept to directions such as left/right or north, south, east, and west. Discuss how hard it would be to give directions without these consistent terms.

- If students have difficulty investigating health issues:
    - Review the issues relevant to the specific assignment.
    - Explain the reasons for investigating the particular issues and why they are important to the students.
    - Provide practice assignment.
    - Break the assignments into smaller sections and evaluate performance frequently.

- If students have difficulty investigating health issues:
    - Help students find appropriate resources.
    - Have students brainstorm for key words to use when searching for information on health issues.

ORAL COMMUNICATION

Oral Presentation

- If students have difficulty making informative presentations:
    - Emphasize the value of carefully plan what students want to say and how they want to say it.
    - Name an audience and a topic. Have students discuss ways to make an informative presentation to the audience about a given topic. Have them think about ways of relating the topic to the audience. Ask them how they would change the presentation if the audience were different.
    - Remind students that visual or audio materials sometimes help make presentations more informative and easier to understand.

Interactive Communications

- If students have difficulty giving/following oral directions:
    - Discuss the possible consequences of not following instructions precisely.

  - Review the *importance* of following oral instructions. Give appropriate scenarios when instructions are not followed or are not followed completely and correctly.

  - Discuss the *relationship* between the order of instructions and the appropriate outcome. Emphasize the need to follow instructions in their proper order. Use examples where the order of instructions in a sequence is critical to the outcome of the task.

  - Explain to students that one of the keys to following oral directions successfully is to take notes on the instructions before actually beginning to follow them. Doing this ensures that you will not be surprised as you work through the steps. It also gives you an opportunity to ask questions about steps you do not understand.

  - Tell students that, after they have heard the directions and understand what to do, they should go back to Step 1 and follow the directions step-by-step (without skipping any steps). Remind students that it is important to follow steps in order, even if they think they already know what to do.

- If students have difficulty analyzing/applying nonverbal communication:

  - Explain the importance of nonverbal communication. State that, to fully understand someone's meaning requires paying attention to the person speaking in addition to the words spoken. Voice tone, facial expressions, gestures, and body language often communicate more than words do.

  - Discuss ways in which people communicate nonverbally.

  - Review signs of positive and negative nonverbal communication. Positive signs include: open palms, hands away from body, arms swinging freely; head held high, shoulders upright; relaxed and alert while sitting or standing; smile, pleasant expression. Negative signs include: clenched fist, crossed arms; drooping head and shoulders; frowning, raised eyebrows, clenched teeth; nail biting, pulling at hair or clothing.

  - Have students locate pictures or photographs of people from magazines or newspapers, or observe people communicating. Ask students to discuss the impressions they get from the body language and facial expressions used.

  - Discuss the impact of body language on communication in general. Then, choose specific business and other situations in which body language has a positive or negative impact.

- If students have difficulty communicating with clients/customers/patients:

  - Remind students that a key to getting along with and successfully communicating with clients, customers, or patients is to treat them with the same respect and attitude you would like to receive. State that no one enjoys being talked down to or being treated unkindly or rudely. Also stress that it is very important to remember that a person's beliefs and ideas are theirs and should not be imposed upon others. Clients, customers, or patients should never be expected to change their beliefs; they should expect to have their beliefs respected, even if those beliefs are different.

  - Remind students that one of the best ways to successfully communicate with anyone is to listen thoughtfully and carefully to the other person(s). Do not assume that you know what the other person is going to say; this often leads to misunderstandings.
  - Have students give examples of how they have successfully communicated with clients, customers, or patients.

- If students have difficulty communicating with professional colleagues/associates:
  - Remind students that a key to getting along with and successfully communicating with professional colleagues/associates is cooperation and compromise. Have students suggest reasons why it is important that associates work together, as well as ways to accomplish this cooperation. (Discussion should include working as a team with a common goal, not blaming others for problems or mistakes, furnishing help or making constructive suggestions when needed, listening to suggestions from others, etc.)
  - Remind students to treat their colleagues/associates as they would like to be treated. This helps ensure that all workers will be treated with respect.

INTERPERSONAL OR RELATING

General Relating

- If students have difficulty interacting with clients/customers/patients:
  - Remind students that a key to getting along with and successfully communicating with clients, customers, or patients is to treat them with the same respect and attitude you would like to receive. State that no one enjoys being talked down to or being treated unkindly or rudely. Also stress that it is very important to remember that a person's beliefs and ideas are theirs and should not be imposed upon others. Clients, customers, or patients should never be expected to change their beliefs; they should expect to have their beliefs respected, even if those beliefs are different.
  - Remind students that one of the best ways to successfully communicate with anyone is to listen thoughtfully and carefully to the other person(s). Do not assume that you know what the other person is going to say; this often leads to misunderstandings.
  - Have students give examples of how they have successfully communicated with clients, customers, or patients.

CREATIVE THINKING/PROBLEM SOLVING

Cognitive Activities

- If students have difficulty collecting/recording information:
    - ☐ Suggest that they first decide how and where the information will be collected and recorded. It is also very helpful to identify how the information will be used. Explain that it is always best to come prepared with pencil or pen and a preplanned sheet for recording the specific information to be collected. This preparation allows you to devote careful attention to your work.
    - ☐ Research and outline for students the steps in using any of the following "tools" for collecting/recording information: brainstorming, brainwriting, checksheets, interviewing, and surveying.
- If students have difficulty identifying critical elements/issues:
    - ☐ Instruct students to read or examine their sources carefully, noting key words and ideas.
    - ☐ Suggest they list the questions they hope to answer.
- If students have difficulty analyzing/synthesizing information:
    - ☐ Define the terms "analyze" and "synthesize." Compare and contrast their meanings.
    - ☐ Remind them that to analyze they must break the information down into all its component parts in order to understand it.
    - ☐ Remind them that to synthesize information they should put all the component parts together in a way that makes the information usable.
    - ☐ Explain that it is usually necessary to learn about complex items or things by examining their make-up or parts, such as studying body structure by examining each individual system or studying auto mechanics by examining the different automobile systems.
    - ☐ Also explain that it is sometimes necessary to then study the whole item or thing by studying how the parts work together to make the whole item work. This examination helps us identify and compare the relationships the parts have with each other.

- Help the students understand the concepts by asking what they would do if they turned on a light and nothing happened. Lead them to discuss that they would probably first check to see if the light was plugged in or if the bulb was burned out. Plugging it in or replacing the light bulb might make the light come back on.

- Then ask the students what they would do if the light still didn't work. Lead them to the conclusion that they should check to see if all the electricity was off. If it is, they will have to think about what they know about the whole electrical system—what are its parts. Identifying the parts of the whole will help them identify the problem.

- If students have difficulty creating a finished product:
  - Have them to go back to the beginning and reidentify what it was they wanted to accomplish. Have them ask themselves how they intended to accomplish this and why it has been difficult to accomplish. Have them decide if their original idea is "do-able" or if they should decide on a new final product that they will be able to complete.
  - Be sure that the students realize that one of the most important aspects of creating a finished product is the planning of the desired finished product.

- If students have difficulty evaluating results/outcomes:
  - Help students define what the expected outcome will be before they begin the project. If they have a clear idea of what to expect, they will be more able to evaluate the results.
  - Help the students establish evaluative criteria on which to base the results of their project. Remind them that they need to establish the guidelines prior to the project in order to get an accurate evaluation.

EMPLOYABILITY

Job Acquisition/Development

- If students have difficulty mastering specific job task/procedure:
  - Discuss the importance of mastering specific job tasks or procedures. Explain that it is probably impossible to find a job where there isn't a task or procedure to be mastered. Remind them that future employers will be more likely to hire people who can already perform the tasks required.

- ☐ Ask the students to share methods they have used to master specific job tasks or procedures. Discuss these methods with the class.
- ☐ Emphasize the fact that practice makes a person proficient and proficiency makes a person confident.
- ☐ Suggest they study each component of the procedure to determine which area is causing difficulty.
- ☐ Review the entire procedure.
- ☐ Team them with proficient students or professionals to practice the procedure.

- If students have difficulty practicing good work habits/attitudes:
  - ☐ Remind the students that future employers are looking for people with good work habits. Have the students list what they think are good work habits. Discuss each suggestion as it is named. Have them identify ways to improve work habits.
  - ☐ Distinguish between habits and attitudes. Demonstrate how it is possible to have good work habits, but a poor attitude.
  - ☐ Explain the role of good work habits and attitudes in obtaining and retaining employment.
  - ☐ Distinguish between good and poor work habits and attitudes. Give examples.
  - ☐ Discuss the employer's expectations of the student on the job.

- If students have difficulty dealing effectively with customers/clients/patients:
  - ☐ Remind them that one of the keys to dealing effectively with customers, clients, or patients is treating these people with the same respect and attitude you would like to receive. Remind them that no one enjoys being talked down to or being treated unkindly or rudely. Also stress that it is very important to remember that a person's beliefs and ideas are just that—theirs—and should not be imposed on other people. Clients, customers, or patients should never be expected to change their beliefs; they should expect to have their beliefs respected, even if the beliefs seem strange or different.
  - ☐ Remind them that one of the best ways to successfully deal with anyone is to listen thoughtfully and carefully to the other person or person. Don't assume that you know what the other person is going to say because doing this often leads to misunderstandings.
  - ☐ Have the students discuss ways they have successfully dealt with clients, customers or patients. Briefly sum up the ways people have successfully dealt with customers, clients or patients.